IDENTIFYING PRIORITY HEALTH NEEDS

COMMUNITY HEALTH NEEDS ASSESSMENT

Prepared for the Lake County Collaborative of Health and Community-Based Organizations

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EXECUTIVE SUMMARY

"I want doctors who know me, to stay here. Every doctor I see leaves in a year or two and I have to build a relationship and explain my medical history to someone new." –Focus group participant

"The natural beauty and clean air of this county gets covered up by all the drugs and violence." –Respondent to the Community Survey

Introduction

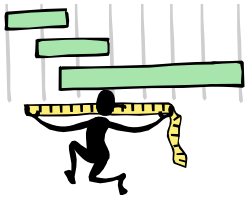
One of the best ways to gain a better understanding about health needs, disparities, and available resources is to conduct a comprehensive needs assessment. A community health needs assessment provides the foundation for all community health planning, and provides appropriate information on which policymakers, provider groups, and community advocates can base improvement efforts; it can also inform funders about directing grant dollars most appropriately.

In 2009-2010, the two Lake County hospitals, St. Helena Clearlake and Sutter Lakeside—joined by Lake County Public Health and other organizations—formed a Collaborative to plan for a needs assessment that could assist healthcare organizations, individually and collaboratively, in improving community health and maximizing resources. The assessment was also intended to guide the hospitals in developing their Community Benefits Plans to meet SB 697 requirements.

BARBARA AVED ASSOCIATES, a Sacramento-based consulting firm, was retained to conduct the community health needs assessment. Two primary data sources were used in the process: the most recently-available demographic, socioeconomic, and health indicators commonly examined in needs assessments; and, data from a community input process to help put a "human face" on the statistics. The community input—a widely distributed online and hard-copy survey; focus groups; and key informant interviews intended to solicit opinions about health needs and suggestions for improvements—validated and enriched the statistical data. It is an unavoidable fact that any report of this type will soon have some data that are not the most up-to-date.

This *2010 Lake County Community Health Needs Assessment* presents the community with an overview of the state of health-related needs and benchmarks from which to gauge progress. It also provides documentation for decision-making to direct funding and other support towards the highest-priority health needs in the community.

Highlight of Findings



Demographics

- With 21% of residents over the age of 65, the county has nearly twice the proportion of older residents than California as a whole. The anticipated significant growth in this age group will put a larger burden on the health care system and local economy, which may not have sufficient community services or tax base to support it.

- Lake County's population is projected to become increasingly culturally diverse in coming years. For example, the Hispanic population is projected to increase 3-fold and persons identifying as multi-race by 2-fold from 2000 to 2050.

Socioeconomic Factors

- Based on 2008 self-sufficiency standards, 4 in 10 Lake County households lacked enough income to cover "bare bones" living expenses. One-third of the population was reported to be "food insecure." In 2009, two-thirds of students were receiving free-reduced price lunches.

- While the proportion of the population age 0-64 who were uninsured all or part of the year in Lake County is similar to the state, the rate of uninsured all or part of the year for children ages 0-18 (17.9%) was nearly 3 times the statewide rate.

- Lake County has the highest percentage of seniors covered by a combination of Medicare and Medi-Cal in the northern and Sierra Counties region. It has the second lowest percentage of seniors that have private supplemental coverage in addition to Medicare.

- Similar to the statewide dropout rate, Lake County's high school dropout rate (16.7%) rose 5 percentage points from 2005 to 2008. In general, dropout rates among Hispanic, African American and Native American students in Lake County were higher than the overall county rate.

Key Health Factors

Communities commonly measure their health against statewide averages and national objectives such as Healthy People 2010. Community health indicators include demographic and socioeconomic factors, which play out in diverse ways; death and disease rates; conditions related to births; oral health; mental health; safety; substance abuse; and health prevention activities. Indicators where Lake County compares favorably or unfavorably are shown in the chart on the following page. *Even areas where county levels of health are similar to state and national averages may still warrant more attention.*

How Does Lake County Compare on Common Community Health Status Indicators?

Indicator	Lake County Status Compared to:	
	California	National Health Objective (Healthy People 2010)
⇧ = *More favorable* (e.g., better than state average, exceeds national benchmark). ⇩ = *Less favorable* (e.g., worse than state average, does not meet national benchmark). ⇔ = *Similar* (e.g., the same or close to state average, meets national benchmark).		
Self-Rated Health Status		
Total, % reporting excellent, good, fair	⇩	N/A
Seniors 65+, % reporting excellent, good, fair	⇧	N/A
Morbidity (Disease and Illness)		
AIDS incidence	⇧	⇩
Chlamydia incidence	⇧	N/A
Prevalence of heart disease	⇩	N/A
Prevalence of diabetes	⇧	⇩
Prevalence of obesity	⇩	⇩
Asthma	⇔	N/A
Mortality (Death)		
All cancers	⇩	⇩
Lung cancer	⇩	⇩
Colorectal (colon) cancer	⇔	⇧
Female breast cancer	⇧	⇧
Coronary heart disease	⇩	⇧
Diabetes	⇧	N/A
Chronic liver disease and cirrhosis	⇩	⇩
Maternal Health Factors		
Low infant birth weight	⇧	⇩
Adequate prenatal care/early entry into care	⇩	⇩
Birth to teen mothers	⇩	N/A
Tobacco, Alcohol and Drug-Related		
Adult arrests for driving under-the-influence	⇩	N/A
Alcohol-involved motor vehicle accidents	⇩	N/A
Adults who currently smoke	⇩	⇩
Underage alcohol use	⇩	⇩
Protective/Preventive Factors		
Children who visited a dentist in the last year	⇧	⇧
Children with complete immunizations	⇩	⇧
Breastfeeding	⇔	⇧
Breast cancer screening	⇩	⇧
Colorectal screening	⇔	⇧
Total		
	⇧=7 ⇩=15 ⇔=4	⇧=8 ⇩=9 N/A=9

Note: Measures are for the overall population; differences may exist for age, race/ethnic and other groups. Small sample sizes make some indicators statistically unreliable.

Input from the Community

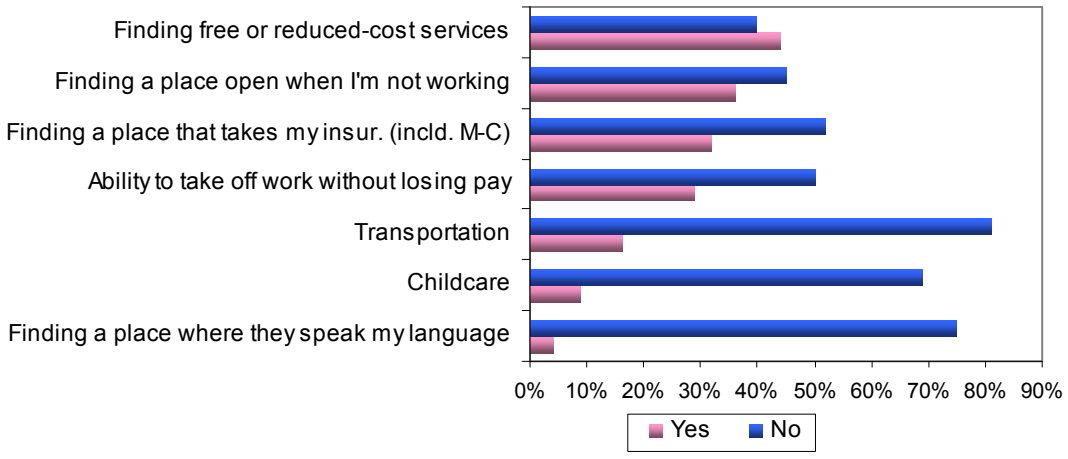
The tables below describe what the community identified as the most important unmet health needs in Lake County and suggested for improvement. The findings are consistent with recent needs assessments, studies, and surveys conducted by others in Lake County.

Unmet Health Needs

The highest-priority unmet health needs and problems for people in Lake County, according to the different groups asked, were the following, in order of mention.

Community Health Survey	Community Focus Groups	Key Informant Interviews
Affordable medical/dental services	Affordable medical/dental services	Alcohol and drug related (prevention, treatment, and enforcement)
Better nutrition/weight control	Alcohol and drug related (prevention, treatment, and enforcement)	Transportation options
Alcohol and drug related (prevention, treatment)	Prevention education (nutrition, especially)	In-county specialty care services
Exercise/activity-related (preventive)	Dental services (especially adults, seniors)	Affordable medical/dental services
Chronic disease (prevention, management)	Transportation options	Dental services (especially adults, seniors)
Affordable community-based mental health services (depression, anxiety)	Supportive services for seniors (to remain independent, engagement for mental health)	Affordable community-based mental health services (depression, anxiety)

Some of the following barriers were "*usually* a problem" when seeking medical or dental services for the people who responded to the Community Health Survey:



Suggested Strategies and Solutions

The community made many recommendations about where additional support was needed to improve health in Lake County; the most frequently suggested strategies and solutions—which tie to the needs they identified—are listed below in frequency of mention.

Community Health Survey	Community Focus Groups	Key Informant Interviews
Affordable health insurance	Food-related support (including education)	Awareness/targeted outreach regarding services and resources
Year-round range of activities for all youth	Affordable exercise places/options	Transportation assistance
Prevention/wellness-type centers and services	Affordable health insurance	Expanded health services in rural areas, including mobile
Supportive services for seniors	Year-round youth activities	In-home support services (especially for seniors)
Affordable mental health/ counseling services	Alcohol and drug prevention and recovery services	Food-related support
Affordable dental services	Transportation assistance	Attract more local medical specialty services

Important factors that act to promote (assets) or hinder (challenges) health in Lake County were identified by the general public and community leaders:

Unique Characteristics about Lake County that are Believed to Affect Health and Well-Being
Assets
▪ Clean air ▪ Natural beauty of the environment ▪ Slower/more manageable pace of life ▪ Outdoor opportunities for exercise/activities ▪ High-quality health care facilities ▪ Potential for locally grown fresh food
Challenges
▪ Extent of drugs and alcohol and their effects (e.g., violence, crime) ▪ Poverty (low wages, no jobs, loss of health benefits) ▪ Challenging geography (travel distances, transportation options, social isolation) ▪ Lack of community activities/entertainment

Health Resource Availability

Some of the infrastructure needed to provide health services is in place in Lake County, particularly for those with employer-based health benefits. A number of non profit organizations, including community and outpatient health clinics recognized as being safety net providers, serve the neediest residents along with two non-profit hospitals. Health coverage is available for low-income children, including access to dental services. The gaps are most evident in the *limitations* to the infrastructure. An inadequate number of physicians and dentists, especially specialists, practice in the community. (The economic base of the county may not support additional private medical and dental practices, however.) Most private providers do not take people with Medi-Cal. Public health and mental health services—typically the backbone of the public healthcare system—have been shrinking as a result of continued reductions in state and federal funding, and the private sector does not have the capacity or resources to pick up the slack. Similar to other rural counties, the local emergency medical system can only handle certain levels of trauma care, requiring residents to use out-of-county facilities. Comprehensive community-wide preventive health in all aspects of community life in Lake County is underprovided.

Conclusions and Recommended Priorities

After evaluating all of the data collected from the needs assessment process, certain key findings emerged, including:

Positives

- Relatively high community awareness about the value of prevention and taking responsibility for their own health
- Rates of breastfeeding similar to the state average
- Lower rates of female breast cancer
- Children's access to oral health services

Challenges

- The growing trend of obesity and diabetes
- The degree of substance use/abuse, including during pregnancy
- Late entry into/inadequate prenatal care
- Food insecurity, especially among seniors
- The percent of adults who smoke
- The higher-than-statewide averages for most causes of death

Recommended Priorities

The Collaborative agreed that an important opportunity exists in Lake County for all health partners—regardless of their own organization's mission and priorities—to focus on the following 4 priority areas:

- **Senior support services** that encompass mental, social, and physical health and well being, including needed support for caregivers;

- **Substance abuse** as an issue for families, schools, businesses, and the safety of the community—ranging from use during pregnancy to underage drinking to abuse of prescription drugs by seniors and other adults—that recognizes and integrates biological and socio-cultural factors into models of prevention and care;

- Strategies that address **preventive health**, including the growing epdemic of obesity;

- **Mental and emotional health** and its relationship to overall health that needs to be more adequately understood, addressed, and resources provided for.

INTRODUCTION

"People will ask their friends for [medical] advice and do what they say and not go to the doctor because they can't afford it."—Focus group participant

"When you only have $10, it seems like it goes further at McDonald's than it does at Safeway, where you're shopping the $1 menu to feed your family."—Focus group participant

Every individual and every institution in a community has a stake in health. Poor health is costly to individuals trying to hold down a job, employers who pay for sickness in high rates of absenteeism or higher health insurance costs, and entire societies, which suffer economic losses when citizens are ill. As a result, all individuals and institutions benefit by addressing the social, environmental, and behavioral determinants of health.[1]

Health status is closely related to a number of socioeconomic characteristics. Individuals of different socioeconomic status show profoundly different levels of health and incidence of disease, and race and ethnicity matter in complex ways. Social and economic variables that have been shown to affect health include income, education, employment and even literacy, language and culture.

"Health literacy," for instance, is a concept that links a person's level of literacy with their ability to act upon health information and, ultimately, to take control of their health. Individuals with poor health literacy—who tend to be poorly educated, immigrants, elderly or members of racial/ethnic minority groups—are at risk for unsafe care when important health care information is communicated using medical jargon and unclear language that exceed their literacy skills. These individuals can have problems reading materials such as prescription bottles, educational brochures, and nutrition labels and are more likely to have higher rates of complications than people who are more literate.[2]

It is important for communities to understand that "health" is a multi-dimensional concept. Individual health status can be rated along any of several dimensions, including presence or absence of life-threatening illness, risk factors for premature death, severity of disease and overall health. It may also be assessed by asking the person to report his or her overall perception of health. The health of an entire population is determined by aggregating data collected on individuals. The commonly used measures of population health status are morbidity (incidence and prevalence of

[1] Kottke TE, Pronk NP. Taking on the Social Determinants of Health: A Framework for Action. *Minnesota Medicine*, February 2009.

[2] Weiss BD, et al. *Health status of illiterate adults: relation between literacy and health status among persons with low literacy skills.* J Am Board Fam Pract 1992 May-June;5(3):257-64.

disease) and mortality (death rates). Judgments regarding the level of health of a particular population are usually made by comparing one population to another, or by studying the trends in a health indicator within a population over time.

One of the best ways to gain a better understanding about health needs, disparities and available resources is to conduct a comprehensive needs assessment. A community health needs assessment provides the foundation for all community health planning, and provides appropriate information on which policymakers, provider groups, and community advocates can base improvement efforts; it can also inform funders about directing grant dollars most appropriately. One of the most important aspects of the community health needs assessment is obtaining information and views from community members themselves. This involves surveying a certain sample of the community to find out which health problems are most prevalent and soliciting their ideas about strategies to address them. It also explores the factors that affect the design of programs and services to effectively address the identified health problems.

The U.S. Public Health Service established two overarching health goals for the year 2010: (1) increase quality and years of healthy life; and (2) eliminate health disparities.[3] To achieve these two goals, a comprehensive set of objectives was established (*Healthy People 2010*), and 10 leading health indicators were identified and used over the last decade to set priorities and measure health (see box below).[4] These indicators, selected on the basis of their ability to motivate action, the availability of data to measure progress, and their importance as health issues for the public, frame the Lake County community health needs assessment.

Leading Health Indicators from *Healthy People 2010*

1. Physical Activity
2. Overweight and Obesity
3. Tobacco Use
4. Substance Abuse
5. Responsible Sexual Behavior
6. Mental Health
7. Injury and Violence
8. Environmental Quality
9. Immunization
10. Access to Health Care

[3] U.S. Department of Health and Human Services. *Healthy People 2010*. Washington, DC: U.S. Department of Health and Human Services, 2000.

[4] Every 10 years, the U.S. Department of Health and Human Services applies scientific insights and lessons learned from the past decade, along with new knowledge of current data, trends, and innovations, and updates the Healthy People Objectives. The HP 2020 Objectives were under final review at the time of this report; they are anticipated to be released in late 2010.

This report presents the results of a comprehensive Lake County community health needs assessment that spanned approximately 8 months. Various other reports and assessments of Lake County may contain similar data because some of the data are publicly available and may be used by other groups for similar purposes.

BACKGROUND

In 2009, the Lake County hospitals—joined by Lake County Public Health and others interested in community health—formed a Collaborative to identify data that could assist healthcare organizations, individually and collaboratively, in improving community health and maximizing resources in Lake County (see Appendix 1 for the working committee). The data assessment was also intended to guide the local hospitals in developing their Community Benefits Plans to meet SB 697 requirements.[5]

Purpose

The goals of the Lake County community health needs assessment were to help document and understand the following:

- The unique characteristics of the community that contribute to or threaten health;
- The health habits people think contribute most to maintaining their own health;
- The kinds of health problems and needs (physical, mental, social) that members of the community are experiencing, and which are the highest needs;
- What contributes to or causes these problems (including barriers);
- The resources (organizations, funding, community expertise, other strengths and assets) that are available to address these health problems, and the biggest gaps;
- How the highest-ranked needs can most effectively be met—identifying priorities for strategies and solutions for community investment.

Uses for the Needs Assessment

The Lake County Community Health Needs Assessment is intended to be useful to leaders and organizations involved in addressing the health needs of county residents by:

1. Providing documentation for decision-making by policymakers;
2. Presenting the community with an overview of the state of health-related needs and benchmarks from which to gauge progress;
3. Directing funding towards the highest-priority health needs in the community.

[5] Under SB 697 legislation, California non-profit hospitals are required to conduct community needs assessments every 3 years, and based on the results develop and implement a Community Benefits Plan.

Scope of the Assessment

While many factors, complex and interrelated, impact community health and well being, for pragmatic not philosophical reasons the Collaborative made the decision to limit the collection and presentation of secondary data[6] to physical and mental health issues. Very little of the environmental and other conditions affecting health (e.g., air, water and housing) were included in the analysis. Particular emphasis was paid to population groups with recognized disproportionate needs (e.g., low-income groups, seniors, Native Americans, Latinos).

Limitations of the Published Data

There are several ways to present data just as there are multiple ways to identify health needs: by age group (children, adolescents, seniors), by issue (access, uninsured) or problem (asthma, infant mortality), by ethnic group (Latinos, Asians), by systems (hospitals, clinics). Regarding the published data (referred to as "secondary data"), this assessment looked at the community health indicator data typically collected in community needs assessments, added to it, and highlighted populations and issues of interest where the data already existed. Where data were available by more than one variable (for instance, age and racial/ethnic group) they are generally presented.

Using secondary data requires collecting information from many sources. Data availability varies among different data sources; new data are continually being released. Any report of this type will soon have certain data that are not the most up-to-date. (For example, 2009 data from CHIS, the California Health Information Survey, which is a rich data source for community health needs assessments, is expected to be released in early 2011, a few months after this report is released.) Also, reporting periods can vary by calendar year, frequency and fiscal year; consistency varies, especially over time and among agencies and organizations; and data are not always collected in the format that is best suited to the purposes of the report.

This assessment relied on data that could be collected and analyzed to determine if and to what degree a problem or need existed. In some cases, data did not exist that directly applied to a certain need or condition; in other cases, no indicators were readily available to describe a potential need. The community input process (referred to as "primary data") provided some opportunity to identify such needs and ensured that they were considered in the priority-setting process.

The availability (or lack) of services can substantially influence reporting. Some data were not collected, such as the availability of services from private medical groups, and therefore could not be counted in the capacity assessment.

[6] *Secondary* data are the statistics published or reported to government agencies. An example of this would be rates of childhood obesity. New data gathered to investigate and help solve a problem are called *primary* data. An example of this would be the percentage of focus group participants who ranked obesity as a top-10 health problem.

In some cases, statistics and information that others compiled have been included in this report. However, it was not always possible to authenticate all of that data. In some cases, expert opinion was included in the analysis regarding the state or condition of a certain issue. And, while funding strategies and solutions to address unmet needs were identified by participants in the community input process, there was no attempt by the Collaborative to evaluate these suggestions for appropriateness or endorse them relative to best practices and evidence-based effectiveness.

Finally, no one data set in this report really tells the whole story about Lake County's unmet or under-met health needs; all of the data collected by this process—the statistics, feedback from the community questionnaire, focus group input and key informants' perspectives—*collectively* paint the picture. It is therefore suggested that readers consider the entirety of the findings when drawing conclusions or making policy changes and funding decisions.

Study Team

BARBARA AVED ASSOCIATES (BAA), a Sacramento-based consulting firm, was retained to carry out this needs assessment. BAA met monthly with the Collaborative, designed the project, developed the data collection instruments, collected and analyzed the data, and prepared the final products—this comprehensive report and a 2-page Overview document to facilitate sharing highlights of the assessment. The consultant team included Barbara M. Aved, RN, PhD, MBA, an expert in community health; Mechele Small Haggard, MBA, a research and evaluation consultant; Beth Shipley, MPH, a public health professional with expertise in maternal, adolescent, and child health programs; and Anita Garcia-Fante, BA, a bicultural/ bilingual communications professional.

PROCESS (METHODS)

"I try to laugh all day long.'"—Focus group participant responding to a question about ways to maintain personal health and well being.

"I sleep with a gun under my mattress."—Focus group participant responding to the same question.

DATA COLLECTION

Quantitative and qualitative methods were used to collect information for this assessment, which included both primary and secondary data sources.[7] Community needs assessments and environmental scanning—which involves gathering, analyzing and *applying* information for strategic purposes—provide the necessary information to inform decision makers and funders about the challenges they face in improving community health, and the priority areas where support is most needed. The information is also useful for community organizations by having comprehensive, local data located in one document.

SECONDARY DATA: PUBLICLY-AVAILABLE STATISTICS

Existing data were collected from all applicable existing data sources including government agencies (e.g., California Department of Finance, Office of Statewide Health Planning and Development, California Department of Health Care Services) and other public and private institutions. These data included demographics, economic and health status indicators, and service capacity/ availability. To emphasize a point made in the previous chapter, all needs assessments are dependent on access to timely and reliable data. While data at the national and state level are generally available for community health-related indicators, local data—from counties and cities—are less accessible and sometimes less reliable. For example, small sample sizes can result in statistical "instability," and well-meaning data collection methods without appropriate "rigor" may limit the value of the findings. Because data from publicly-available sources

[7] *Quantitative* data are numeric information such as statistics (e.g., the number of vehicular crashes, the percentage of low birth weight babies born). *Qualitative* data help shed additional light on the issues being studied by providing information such as people's attitudes and opinions. *Secondary* data are the statistics and other data already published or reported to government agencies. An example of this would be rates of childhood obesity. New data gathered to investigate and help solve a problem are called *primary* data. An example of this would be the percentage of focus group participants who ranked obesity as a top-10 health problem.

typically lag by at least 2 years—because it takes time for reported data to be received, reviewed, approved, analyzed, and prepared for presentation—data may not always be as current as needed. And, some data may only be reported as 3-year averages, not annually.

DOCUMENT REVIEW

A document review was undertaken that collected relevant information about the community, health status, where health services are obtained, other related services, and gaps in services. This information was found in documents and records of facilities such as data from local clinics and state government, reports from earlier needs assessments conducted related to health, and reports about specific health programs or services.

PRIMARY DATA: COMMUNITY INPUT PROCESS

Three primary methods of collecting input from the community were used in the assessment.

Community Survey

A questionnaire was developed in English and Spanish for the general public that inquired about most-important health needs, ideas for responsive solutions, and habits they used to maintain their own personal health (Appendix 6). Certain questions that serve as markers for access to services were also included. The survey was distributed in hard copy by members of the Collaborative to locations where the groups of interest would best be reached, such as at health fairs, casinos, branches of public libraries, and family resource centers throughout the county. In addition, the survey was available by computer (English/Spanish) and notices about the online version were posted on various organizations' websites and in their newsletters including, to a limited degree, Spanish-speaking media outlets. All of the electronic and hard-copy survey data were cleaned, coded, and entered into an Excel spreadsheet and analyzed using SPSS Version 15.0.

Community Focus Groups

Three locations—Clearlake, Lakeport and Kelseyville—were chosen to ensure geographic representation and 6 community focus groups were conducted at sites intended to draw populations that typically gathered there. Key community-based organizations were identified by the Collaborative and asked to host a focus group. Focus groups were co-scheduled at the sites among participants who were already meeting there for other purposes (e.g., young mothers at a parenting class) to facilitate access and promote attendance. Although the participants constituted a convenience sample, there was the expectation that *in the aggregate* the groups would be diverse and include the populations of highest interest.

To ensure that working people could attend, some of the meetings were held in the evening. One meeting was held in the early morning to accommodate people coming to drop their children off at a preschool, and other daytime meetings were held for seniors or others who had difficulty driving at night or did not like to go out after dark. One of the groups was facilitated in Spanish with a bilingual/bicultural facilitator using a set of key questions (Appendix 2). The questions were generally open-ended; prompting with information or data was limited to reduce the potential for bias or leading of participants to any conclusions. Participants were not asked to "vote" or otherwise rank the items they identified as needs, problems or solutions. The focus group data were recorded on a flip chart by the facilitator during the meetings then transferred to written summary formats where it was coded and analyzed.

Colorful gift bags containing practical and other items (e.g., toothbrush, toothpaste, water bottle, magnetized refrigerator clips, Blue Diamond® almonds) were offered in appreciation for participation. Agencies and organizations that sponsored the community meetings helped to publicize the meetings and promote attendance.

Key Informant Interviews

In-depth telephone interviews using a structured set of questions were conducted, primarily individually, with 15 individuals who agreed to be interviewed whose perceptions and experience were intended to inform the assessment (Appendices 3 and 4). The interviews provided an informed perspective from those working "in the trenches," increased awareness about agencies and services, offered input about gaps and possible duplications in service, and solicited ideas about recommended strategies and solutions. The interviews also focused the needs assessment on particular issues of concern where individuals with particular expertise could confirm or dispute patterns in the data and identify data and other studies the Collaborative might not otherwise be aware of.

PRIORITY SETTING PROCESS

After the assessment data were compiled and analyzed, the Collaborative reviewed the draft assessment report and engaged in a discussion that led to recommended priorities for funding. The process included determining criteria for selecting priorities; listing key issues and common themes; identifying findings that were unexpected and surprising and assumptions that were supported by the data; addressing the challenges and barriers; and determining opportunities with long-term benefit for improving community health in Lake County.

ASSESSMENT RESULTS

"There's a high state of general anxiety about everything now. People don't even know how to respond."—Key informant interviewee commenting on residents' needs.

"This is a bootstrap community; there's this attitude that everyone should be taking care of their own."—Key informant interviewee explaining why some residents aren't engaged in solving community problems.

Section I. Demographic and Socioeconomic Characteristics

There are large health disparities among certain groups and across socioeconomic lines. Research shows that race and ethnicity, for example, matter in complicated ways. To address these disparities, approaches are needed—identified and planned for through comprehensive needs assessments—that include a focus on the "upstream" causes, such as income inequity, poor housing, racism, and lack of social cohesion.[8]

COUNTY PROFILE

Lake County is located in Northern California just two hours by car from the San Francisco Bay Area, the Sacramento Valley, or the Pacific Coast. It is predominantly rural, about 100 miles long by about 50 miles wide, and includes the largest natural lake

[8] Brownson RC, et al. Evidence-Based Public Health. 2003. New York: Oxford University Press.

entirely within California borders. Lake County is mostly agricultural, with tourist facilities and some light industry. Major crops include pears, walnuts and, increasingly, wine grapes. Dotted with vineyards and wineries, orchards and farm stands, and small towns, the county is home to Clear Lake, California's largest natural freshwater lake, known as "The Bass Capital of the West," and Mt. Konocti, which towers over Clear Lake.

Within Lake County there are two incorporated cities, the county seat of Lakeport and Clearlake, the largest city, and the communities of Blue Lakes, Clearlake Oaks, Cobb, Finley, Glenhaven, Hidden Valley Lake, Kelseyville, Loch Lomond, Lower Lake, Lucerne, Nice, Middletown, Spring Valley, Anderson Springs, Upper Lake, and Witter Springs as displayed on the map below.

Lake County is bordered by Mendocino and Sonoma Counties on the west; Glenn, Colusa and Yolo Counties on the east; and Napa County on the south. The two main transportation corridors through the county are State Routes 29 and 20. State Route 29 connects Napa County with Lakeport and State Route 20 traverses California and provides connections to Highway 101 and Interstate 5.

According to California labor market data about county-to-county commute patterns (which have not been updated since 2000), about 67% of people who live in Lake County also work within the county with about 33% going out of county to work (Table 1). While the population size of Lake County was estimated as 64,053 residents in 2010, the population can swell with daytime work commuters and seasonal tourists.

Table 1. County-to-County Commute Patterns, 2000

Area of Residence	Area of Workplace	Number of Workers
Lake County , CA	Lake County , CA	15,566
Lake County , CA	Sonoma County , CA	1,415
Lake County , CA	Mendocino County , CA	1,013
Lake County , CA	Napa County , CA	762
Sonoma County , CA	Lake County , CA	323
Mendocino County , CA	Lake County , CA	254
Lake County , CA	San Francisco County , CA	186
Lake County , CA	Santa Clara County , CA	144
Lake County , CA	Marin County , CA	103
Lake County , CA	Alameda County , CA	99
Lake County , CA	Contra Costa County , CA	83
Lake County , CA	Solano County , CA	79
Lake County , CA	Sacramento County , CA	72
Contra Costa County , CA	Lake County , CA	65
Napa County , CA	Lake County , CA	58
Lake County , CA	Yolo County , CA	56
Lake County , CA	San Mateo County , CA	54
Butte County , CA	Lake County , CA	50

Note: Some data are not shown because the number of commuters is too small.
Source: U.S. Census Bureau, 2000.

Population Data

Demographic trends help to project potential needs for health care and other services for children, adults, and the elderly.

Approximately 30% of all Lake County residents live in the Cities of Clearlake and Lakeport while the remainder lives in the balance of the county. While the population of Lake County has increased overall since the 2000 Census, estimates beyond 2003 (Table 2 on the next page) show a trend of mostly modest growth.

Table 2. Population Estimates of Lake County Cities, 2003-2010 with 2000 Benchmark

City	4/1/2000	1/1/2003	1/1/2004	1/1/2005	1/1/2006	1/1/2007	1/1/2008	1/1/2009	1/1/2010
Clearlake	13,147	13,582	13,739	13,740	13,783	14,039	14,221	14,401	14,385
Lakeport	4,820	5,027	5,057	5,084	5,077	5,062	5,036	5,151	5,140
Balance Of County	40,358	42,919	43,541	44,110	44,614	44,677	44,690	44,523	44,528
County Total	58,325	61,528	62,337	62,934	63,474	63,778	63,947	64,075	64,053

Source: California, Department of Finance, *E-4 Population Estimates for Cities, Counties and the State. May 2010.*

City/county population estimates with annual percent change between January 2009 and January 2010 show zero growth for the county overall (Table 3). The two cities, however, experienced negative change between the two time periods.

Table 3. Population Estimates with Annual Percent Change

County/City	Total Population		Percent Change
	1/1/2009	1/1/2010	
Lake	64,075	64,053	0.0
Clearlake	14,401	14,385	-0.1
Lakeport	5,151	5,140	-0.2
Balance Of County	44,523	44,528	0.0

Source: *California Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change. January 1, 2009 and 2010. May 2010.*

Population by Age and Race/Ethnicity

Three-quarters of the Lake County population identify themselves as non-Hispanic White, 16.8% as Hispanic, 2.6% as Native American, 2.6% as Multi-race, 1.8% African American and 1.0% as Asian/Pacific Islander (Figure 1), less diverse than the state as a whole. About 1 of 5 residents is age 65 and above (Figure 2).

Figure 1. Race/Ethnicity, 2010 (Projected)

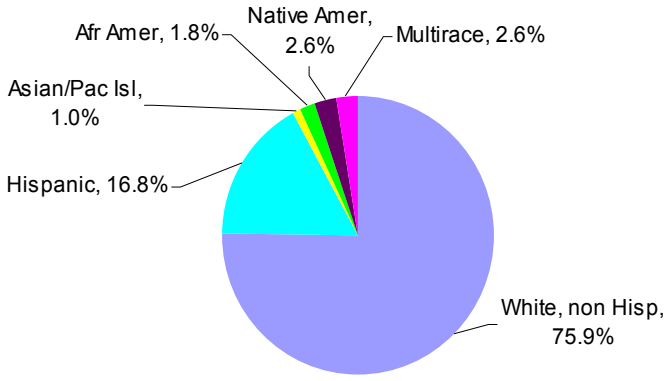
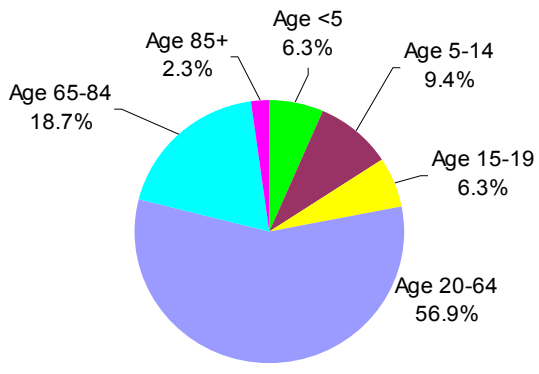


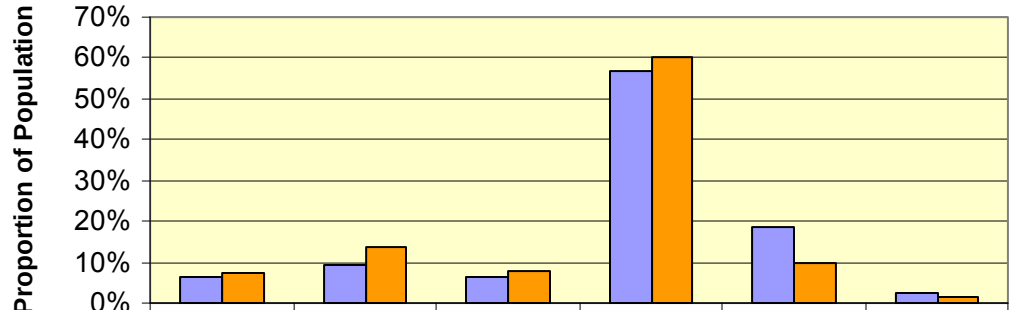
Figure 2. Age of Population, 2010 (Projected)



Source: California Department of Finance, *Population Projections by Race/Ethnicity and Age Report.*

With 21% of all residents over the age of 65, Lake County has nearly twice the proportion of older residents than California as a whole (11.3%) as shown in the graph in Figure 3. The differences in the proportions of children younger than age 5 and adolescents 15-19 are not substantially different between the Lake County and the state.

Figure 3. Age Groups, Lake County and California, 2010 (Projected)



	Age <5	Age 5-14	Age 15-19	Age 20-64	Age 65-84	Age 85+
Lake	6.3%	9.4%	6.3%	56.9%	18.7%	2.3%
California	7.1%	13.9%	7.8%	60.0%	9.7%	1.6%

Source: California Department of Finance, *Population Projections by Race/Ethnicity and Age Report.*

In 2008, an estimated 4.9% of Lake County's young adults (ages 18-24) were born outside the U.S., compared to 3.8% of children ages 5-17, and 0.4% of children ages 0-4. Among adults ages 25-64, 10.2% were foreign-born. Lake County's percentage of foreign-born residents is significantly lower than the statewide proportion in each age group, reflecting the greater diversity in the state than the county. For example, 29.7% of California residents age 65+ was born outside the U.S. compared to 7.6% of seniors in Lake County.

Table 4. Percent of the Foreign-Born Population by Age Group, 2006-2008

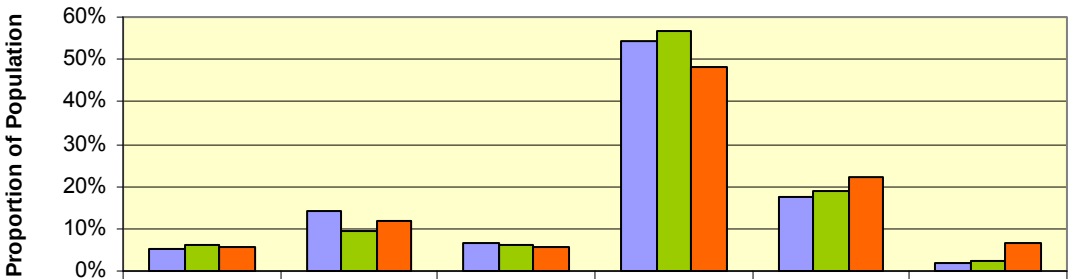
Age Group	Percent	Range: 0 - 75.0%
Ages 0-4	0.4%	
Ages 5-17	3.8%	
Ages 18-24	4.9%	
Ages 25-64	10.2%	
Ages 65 and Above	7.6%	

Source: U.S. Census Bureau, American Community Survey, accessed at http://factfinder.census.gov/home/saff/main.html?_lang=en.

Anticipated Population Changes

Lake County's population is estimated to increase by about 45% by 2050 – from 58,724 to 106,887. As the region's population expands, its demographic makeup is expected to shift, with the senior population rising at a disproportionate rate compared to the rest of the population (Figure 4). The population of residents who are over 60 years old, for example, is expected to increase 59% from 2010 to 2030 from 19,612 to 31,087. The anticipated significant growth in this age group will put a larger burden on the health care system and local economy, which may not have sufficient community services or tax base to support it.

Figure 4. Population Percent Change by Age, 2000 with 2010 and 2050 Projected

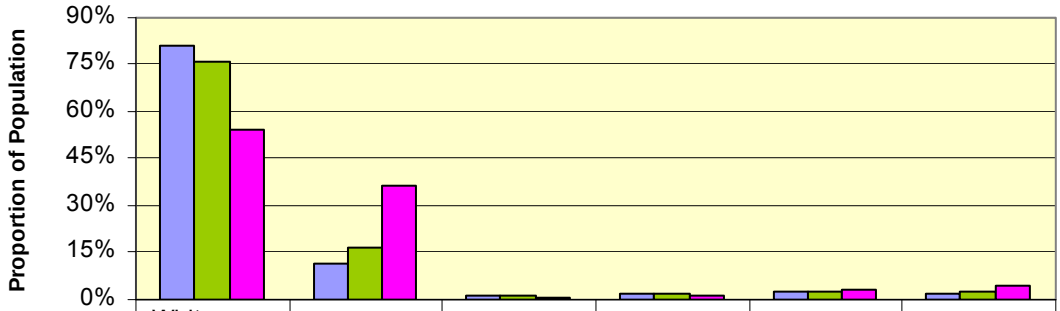


	Age <5	Age 5-14	Age 15-19	Age 20-64	Age 65-84	Age 85+
2000	5.2%	14.3%	6.5%	54.5%	17.4%	2.0%
2010	6.3%	9.4%	6.3%	56.9%	18.7%	2.3%
2050	5.8%	11.6%	5.5%	48.3%	22.0%	6.8%

Source: California Department of Finance, *Population Projections by Race/Ethnicity and Age Report.*

Corresponding to the overall growth in population, Lake County's population is projected to become increasingly culturally diverse in coming years (Figure 5 on the next page). For example, the Hispanic population is projected to increase three-fold and persons identifying as multi-race by two-fold from 2000 to 2050. Conversely, the proportion of non-Hispanic Whites, African Americans, and Asian/Pacific Islanders will decline, similar to the trends projected for California, though to a different extent in the county. The shift in Lake County population groups has implications for designing and delivering needed services in ways that are culturally and linguistically appropriate.

Figure 5. Population Percent Change by Race/Ethnicity, 2000 with 2010 and 2050 Projected



	White non-Hisp	Hispanic	Asian/Pac Isl	Afr Amer	Native Amer	Multi-race
2000	80.8%	11.4%	1.0%	2.1%	2.5%	2.2%
2010	75.9%	16.8%	1.0%	1.8%	2.6%	2.6%
2050	54.1%	36.1%	0.7%	1.4%	3.1%	4.6%

Source: California Department of Finance, *Population Projections by Race/Ethnicity and Age Report.*

SOCIOECONOMIC FACTORS

Socioeconomic characteristics include measures that have been shown to affect health status, such as income, education and employment and the proportion of the population represented by various levels of these variables. There is considerable evidence that individuals with higher incomes have better health.[9] Some of the ways in which poverty contributes to poor health are immediately obvious. Deprivation leading to poor nutrition may lead to susceptibility to infection and chronic disease, and crowded housing may increase disease transmission. Higher incidences of teen pregnancy, inadequate prenatal care, higher rates of low-birth-weight babies, and low immunization rates are all associated with poverty along with a myriad of other adverse health outcomes.

Economic Well-Being

Self-sufficiency income is defined as the minimum income a household must earn in order to adequately meet the basic needs of the family without being obligated to use public or private assistance. In 2008, the self-sufficiency standard for a family of two adults, one preschooler, and one school-age child living in Lake County was an annual income of $50,833 ($12.02 hourly).[10] This means that 4 in 10 Lake County households lacked enough income to cover "bare bones" living expenses. According to U.S. Census Bureau, 2007 American Community Survey data, in 2007, 39.7% of Lake County households lived at incomes below the self-sufficiency standard (Table 5).[11] While the recession technically ended in mid-2009, according to economists, current

[9] Pritchett L, Summers L.H. Wealthier is healthier. *Journal of Human Resources* 31, 841-868, 1997.
[10] Self Sufficiency Tables by County, All Family Types, 2008, http://www.selfsufficiencystandard.org/pubs.html (March 2010)
[11] Overlooked and Undercounted 2009: Struggling to make ends meet in California, 2009 Diana Pearce and United Way of the Bay Area, http://www.selfsufficiencystandard.org/pubs.html (March 2010)

data show the painful, lingering effects have been especially hard on families and children.

Table 5. Household Self-Sufficiency

Area	2007 % of households below Self-Sufficiency Std.	2008 Median Family Income
Lake County	39.7%	$38,926
California	31.0%	$61,017

*Statewide Self-Sufficiency income in dollars is not calculated; it is only available by county.
Sources: *Overlooked and Undercounted 2009: Struggling to Make Ends Meet in California.* US Census Bureau, State and County Quick Facts.

Other Measures of Poverty

"Persons living under poverty," as federally defined, is a common measure of poverty although there are some limits to this method for accurately gauging poverty. Lake County has a higher proportion of people living below the poverty level than California as a whole. In 2008, one in four (24.7%) Lake County children ages 0-17 were estimated to live in families with incomes less than 200% of the official federal poverty level (Table 6).[12] Eighteen percent of the total Lake County population was living below the poverty level, compared to 13.3% statewide.

Table 6. Persons Living Below Poverty Level, Lake County and California

Age Group	2005	2006	2007	2008	California 2008
All ages	18.3%	17.1%	16.4%	17.9%	13.3%
All children under age 18	26.7%	24.9%	26.8%	24.7%	18.5%
Children ages 5-17	24.7%	21.6%`	22.7%	22.1%	17.3%
Persons age 65 and older*	7.6%	6.5%			8.4%

Source: U.S. Census Bureau. Small Area Income & Poverty Estimates. Estimates for California Counties;
*U.S. Census Bureau, 2006-2008 American Community Survey.

Seniors and Poverty

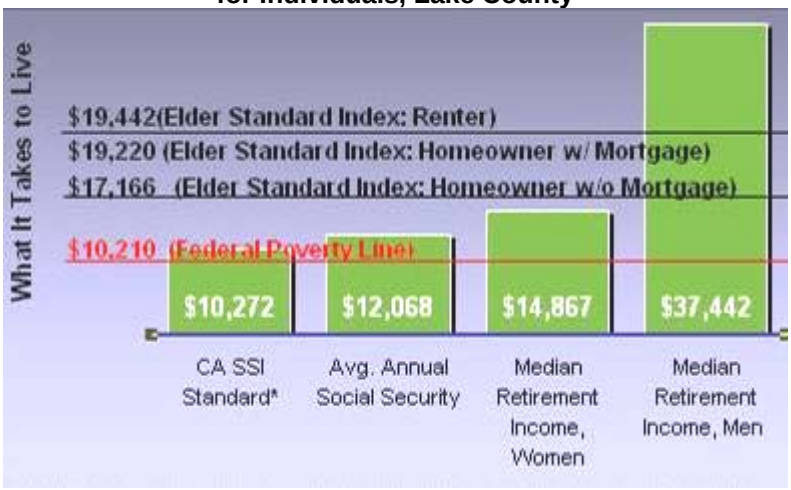
The new Elder Economic Security Standard™ Index (Elder Index) for California measures how much income is needed for a retired adult age 65 and older to adequately meet his or her basic needs including housing, food, out-of-pocket medical

[12] U.S. Census Bureau, *Small Area Income and Poverty Estimates*. Accessed online at http://www.census.gov/did/www/saipe/county.html (March 2010)

expenses, transportation, and other necessary spending.[13] It documents that the federal poverty guideline covers less than half of the basic costs experienced by adults age 65 and older in the state, and demonstrates that elders require an income of at least 200% of the FPL to age in place with dignity and autonomy.[14]

The bar graph below (Figure 6) compares the basic cost of living as quantified by the Elder Standard Index to three common sources of income for seniors. The gap between elders' basic living expenses, as shown by the lines in black, and their income, as shown by the green bar charts, illustrates the degree of economic instability that far too many Lake County elders experience. For example, even elders who own their home outright in Lake County are struggling to survive on incomes below the Elder Index and cannot make ends meet. The average Social Security payment of $12,068 is not enough to live on, and yet, many seniors rely exclusively on Social Security to cover their basic costs.

Figure 6. California Elder Economic Security Standard Index for Individuals, Lake County



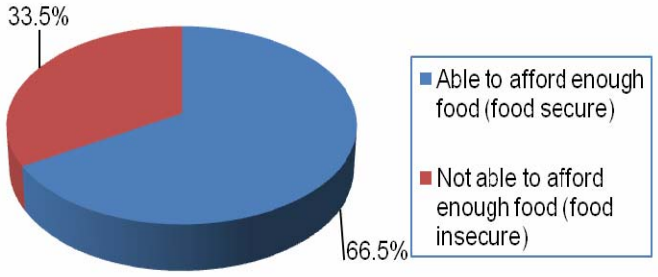
*Median elder retirement income includes Social Security, pensions, and all other non-earned income for seniors 65+. The Elder Standard Index assumes that elders are retired.
Source: http://www.insightcced.org/communities/cfess/elder-lake.html

Not being able to afford enough food and dependence on public assistance for adequate nutrition are other important socioeconomic indicators of community health. Limited resources for purchasing food has a direct impact on health, for example increasing the risk of developing chronic diseases such as diabetes.[15] Based on the

[13] Insight/Center for Community Economic Development, accessed at http://www.insightcced.org/.
[14] Wallace SP, Molina LC. Federal Poverty Guideline Underestimates Costs of Living for Older Persons in California, Los Angeles: UCLA Center for Health Policy Research, 2008.
[15] *The Inextricable Connection Between Food Insecurity and Diabetes*. California Pan-Ethnic Health Network. May 2010.

results of the 2007 California Health Information Survey in Lake County, in which adults whose income is less than 200% of the Federal Poverty Level were asked about the ability to afford enough food, only two-thirds (66.5%) of respondents were considered "food secure" (Figure 7), up slightly from 63.7% in 2005. It was estimated that 5% of the county's population was currently receiving food stamps.

Figure 7. Food Security of Adults <200% of Poverty, 2007



Source: California Health Interview Survey, 2007. UCLA Center for Health Policy Research

Another indicator of low-income status is the number of school children eligible for free or reduced-cost school meals.[16] The percentage of children enrolled in the program in Lake County has risen since 2006, from 64% to 67% in 2009, and is higher than the state rate (Table 7 on the next page).[17] Konocti Unified, Lake County Office of Education, Lucerne Elementary, and the Upper Lake Union school districts have had consistently higher proportions of children enrolled than the county average.

[16] Eligibility for free or reduced-price meals is set at 185% of the federal poverty level.
[17] Kidsdata.org. Lucile Packard Foundation for Children's Health. http://www.kidsdata.org/data/topic/dashboard.aspx?cat=39 (April 2010)

Table 7. Number and Percent of Students Receiving Free-Reduced Price Lunches, Selected Years

	2006	2007	2008	2009
Kelseyville Unified	63%	59%	67%	80%
Konocti Unified	83%	73%	80%	80%
Lake County Office of Education	90%	88%	92%	100%
Lakeport Unified	48%	44%	52%	52%
Lucerne Elementary	77%	75%	66%	72%
Middletown Unified	38%	30%	34%	39%
Upper Lake Union Elementary	72%	72%	78%	79%
Upper Lake Union High	54%	74%	76%	76%
Lake County Total	64%	58%	64%	67%
California State Total	51%	51%	51%	53%

*LNE (Low Number Event) refers to data that have been suppressed because fewer than 20 students were enrolled in the program.
Source: Kidsdata.org. Lucile Packard Foundation for Children's Health.

The proportion of households without a vehicle is another indicator of economic need. As shown in Table 8, the communities in Lake County that have the highest incidence of households without a vehicle available (over 1 in 5 households) include Clearlake, Lakeport, North Lakeport, and Clearlake Oaks. In all places, renter-occupied households have a much higher incidence of households with no vehicle available when compared to owner-occupied households. Some communities, such as Middletown and Upper Lake, did not report any owner-occupied households that did not have a vehicle.

Table 8. Percent of Households with No Vehicle Available

Place	% No Vehicle (Owner-Occupied)	% No Vehicle (Renter-Occupied)
Clearlake	8.3%	29.6%
Clearlake Oaks	5.2%	20.0%
Cobb	1.4%	15.3%
Kelseyville	1.9%	6.8%
Lakeport City	3.8%	21.7%
Lower Lake	6.3%	11.5%
Lucerne	6.4%	18.4%
Middletown	0.0%	10.4%
Nice	8.0%	18.9%
North Lakeport	2.8%	23.0%
Upper Lake	0.0%	15.8%

Source: Lake County Coordinated Public Transit–Human Services Transportation Plan. Nelson/Nygaard Consulting Associates. Data from 2000 US Census Bureau.

Employment

Work for most people is at the core for providing financial security, personal identity, and an opportunity to make a meaningful contribution to community life. Although it is difficult to quantify the impact of work alone on personal identity, self-esteem and social contact and recognition, the ability to have employment—and the workplace environment—can have a significant impact on an individual's well-being.

Lake County's economy is based largely on tourism and recreation, due to the accessibility and popularity of several lakes and recreational areas. As of August 2010, 83.2% of the county's population was in the labor force. According to current labor market data, 21,930 of the 26,360 in Lake County's labor force were employed, a lower proportion than statewide or in the U.S. [18]

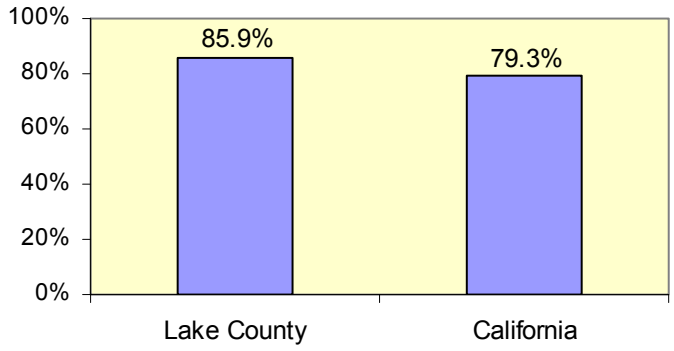
Unemployment

In August 2010, Lake County's civilian unemployment rate was 16.8%—1 of 6 employable people—more than double the rate in 2004. The county's rate was higher than the state rate (12.4%) or national rate (9.5%) in August 2010, and was the 53rd highest of the 58 counties.[19]

Educational Attainment

Educational levels obtained by community residents can affect the local economy. In general, higher levels of education equate to the ability to earn higher wages, experience less unemployment and enjoy increased job stability. The indicator typically used to measure educational attainment is "persons aged 25 and older with less than a high school education". In 2006-08, 85.9% of people aged 25+ in Lake County was a high school graduate or higher, a more favorable rate than the state of 79.3% (Figure 8).[20]

Figure 8. Percent of Residents Age 25+ With More than a High School Education



Source: American Community Survey, 2008.

[18] California Labor Market Review. September 2010. http://www.labormarketinfo.edd.ca.gov/. (September 2010)
[19] Ibid.
[20] American Community Survey, 2008. http://factfinder.census.gov/servlet/DatasetMainPageServlet? (April 2010)

Low educational attainment—particularly dropping out of school—increases the risk of school-age pregnancy. In fact, high levels of school engagement have been found to be associated with postponing pregnancy.[21] In 2006, 40.4% of Lake County births were to mothers with no high school degree, compared to 37.6% statewide.[22]

Research has also shown that young people who drop out of high school are more likely to use drugs/alcohol, be involved in criminal activity, and become teen parents. High school dropouts also have higher unemployment rates and are more likely to receive public assistance. Lake County's high school dropout rate has fluctuated for the most recent three years of data available (Table 9). The four-year derived dropout rate in 2007-08 was 16.7% compared to 11.6% in 2005-06. The statewide dropout rate rose by about five percentage points in the same time period to 18.9% in 2007-08.[23] In general, dropout rates among Hispanic, African American and Native American students in Lake County are higher than the overall county rate.

Table 9. High School Dropouts and Rates for Students Enrolled in Grades 9-12

Ethnic Group	Total Enrolled			Total Drop (9-12)			4-Yr Derived Rate (9-12)		
	05/06	**06/07**	**07/08**	**05/06**	**06/07**	**07/08**	**05/06**	**06/07**	**07/08**
Native Indian	142	144	158	7	18	15	30.4%	45.9%	37.1%
Asian	21	23	23	0	2	0	0.0%	33.3%	0.0%
Pacific Islander	17	15	12	0	0	1	0.0%	0.0%	n/a
Filipino	15	19	20	0	0	1	0.0%	0.0%	12.5%
Hispanic	534	571	552	11	37	24	9.1%	25.5%	17.3%
African American	105	92	92	6	9	5	21.5%	34.6%	24.1%
White	2475	2417	2269	59	139	87	9.9%	21.6%	14.8%
Multi-Race/No Response	115	134	126	12	9	7	38.0%	25.3%	20.3%
County Total	3424	3415	3252	95	214	140	11.6%	23.7%	16.7 %
State Total							13.6%	21.1%	18.9%

Source: California Department of Education, DataQuest.

Because of Lake County's relatively small student subpopulations, there is considerable variation in some enrollment and dropout data, which makes it important to use caution when interpreting trends and comparisons across populations. Additionally, there is some disagreement over whether dropout rates accurately represent the number of students who leave high school without finishing, because there is no standardized method to track students who stop attending school.

[21] The influence of high school dropout and school disengagement on the risk of school-age pregnancy. *Journal of Research on Adolescence 8(2):187-220, 1998.*
[22] Improved Perinatal Outcome Data Reports, Lake County Profile, 2006. http://ipodr.org/055/vs/socioeconomics.html#tablenohs (April 2010)
[23] California Department of Education, DataQuest. http://dq.cde.ca.gov/dataquest/ (April 2010)

Non-English Speaking

Of Lake County's total 2008-09 K-12 enrollment of 9,663, 10.7% are reported to be English-Learners, less than half the state average. The percentages are highest in the early grades—K-3 children account for approximately 46% of Lake County's 2008-09 English Learners. [24] The Kelseyville and Konocti Unified Districts have the highest percentage by a relatively wide margin (Table 10).

Table 10. Percent of English-Learners by Lake County School District

	2006-07	2007-08	2008-09
Kelseyville Unified	14.9%	16.1%	16.2%
Konocti Unified	14.4%	14.0%	14.8%
Lake Co. Office of Education	1.6%	7.4%	4.9%
Lake County Total	10.3%	10.5%	10.7%
Lakeport Unified	7.7%	8.3%	7.5%
Lucerne Elementary	2.5%	1.8%	1.2%
Middletown Unified	7.5%	7.0%	7.7%
Upper Lake Union Elementary	3.2%	4.1%	3.3%
Upper Lake Union High	0.6%	0.0%	0.0%
California State Total	25.0%	24.7%	24.2%

Source: California Department of Education at Ed-Data http://www.ed-data.k12.ca.us/welcome.asp (March 2010)

Of the various languages spoken by Lake County's English Learners, by far the greatest proportion (96%) is Spanish. Less than 10 students speak each of the following languages: Gujarati, Filipino, Cantonese, Punjabi, or other.[25]

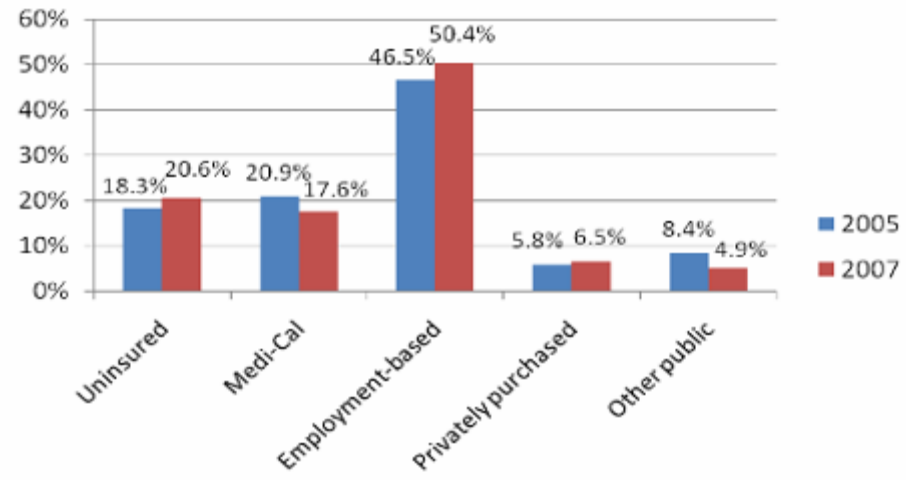
Health Insurance Coverage

With a population that is older, poorer and with less employer-based health insurance coverage, a larger segment of a rural county's population is dependent upon public health care programs such as Medi-Cal, Medicare, and State Children's Health Insurance Programs (e.g., Healthy Families). The cost of health care, including dental and mental health services, creates a barrier to care for people who are not covered by some form of health insurance as is the case for many residents who are in small businesses or self-employed. Lake County's growing senior population, moreover, is expected to incur increasing out-of-pocket medical costs as they age.

[24] California Department of Education at Ed-Data http://www.ed-data.k12.ca.us/welcome.asp (March 2010)
[25] Ibid.

According to the 2007 California Health Interview Survey (CHIS), 79% of Lake County adults age 18-64 had some form of health insurance, leaving over 20% without medical coverage, up from 18% in 2005 (Figure 9). When all ages are included, 86% of Lake residents have coverage. *Having* coverage for care, however, does not guarantee *access* to care if there are an inadequate number of providers in the service area and/or providers are not willing to accept all forms of coverage, including Medi-Cal and Medicare. Approximately 18% of the non-senior adult population is covered by Medi-Cal.

Figure 9. Insurance Coverage of Persons Ages 18-64, Lake County, 2005 & 2007



Source: California Health Interview Survey, UCLA Center for Health Policy Research, 2005 & 2007

Analysis by the UCLA Center for Health Policy Research, based on projected estimates of 2009 insurance status from a predictive model using both CHIS and California Employment Development Department data, found that the number of Californians without health insurance grew in all 58 counties.[26] In Lake County, rates of coverage continued to be less favorable for job-based insurance than California statewide, but slightly better for other forms of coverage, including the proportion of persons who were uninsured all or part of the year (Table 11 on the next page).

[26] *California's Uninsured by County*. UCLA Center for Health Policy Research. August 2010.

Table 11. Insurance Status and Type During the Past 12 Months, Ages 0-64, 2009

Area	Job-Based Coverage All Year	Medi-Cal/Healthy Families Coverage All Year	Other Coverage All Year*	Uninsured All or Part Year
California	50.1%	16.3%	9.3%	24.3%
Lake County	39.1%	23.8%	10.5%	26.7%

*"Other Coverage" includes: 1) individually purchased private coverage, 2) other public coverage, such as Medicare, and 3) any combination of insurance types during the past year without a period of uninsurance.
Source: UCLA Center for Health Policy Research. August 2010. Rates are predicted estimates from a simulation model based on the 2007 California Health Interview Survey and 2007/2009 California Employment Development Department data.

Medi-Cal Coverage

Medi-Cal pays the cost of medical care for children and their parents, the disabled, and elderly who have low incomes. At 17.6%, Lake County's 2007 non-senior adult Medi-Cal enrollment was the 3rd highest of the northern and Sierra Counties. About 40% of young people, ages 0-17, were covered by either Medi-Cal (26.5%) or Healthy Families in 2007, down from 54% in 2005 (40% Medi-Cal). [27] Table 12 below shows that Medi-Cal eligibility of Lake County residents has increased from 2007 to 2009.[28]

Table 12. Persons Certified Eligible for Medi-Cal in Lake County, 2007 - 2009

	July 2007	July 2008	July 2009
Total Persons eligible for Medi-Cal	14,832	15,766	16,486

Source: California Department of Health Care Services.

Seniors and Health Insurance

Most seniors are covered by a combination of Medicare and a private supplemental plan or Medi-Cal (Table 13). Lake County has the highest percentage of seniors who are covered by a combination of Medicare and Medi-Cal in the northern and Sierra Counties region. It has the second lowest percentage of seniors that have private supplemental coverage in addition to Medicare.

Table 13. Type of Current Health Coverage for People Age 65+, 2003, 2005, 2007

Year	Medicare and Other	Medicare and Medi-Cal	Medicare Only
2003	73.0%	15.7%	9.6%
2005	69.3%	14.9%	14.1%
2007	72.7%	12.6%	11.7%

Source: California Health Interview Survey, UCLA Center for Health Policy Research.

[27] California Health Interview Survey, UCLA Center for Health Policy Research, 2005 & 2007
[28] http://www.dhcs.ca.gov/dataandstats/statistics/Pages/MediCalBeneficiariesCountsPivotTable.aspx (March 2010)

Children and Health Insurance

According to the 2007 CHIS, 17.9% of children ages 0-18 in Lake County were uninsured all or part of the year in 2007 (Table 14), nearly 3 times the statewide rate. Lake County's rate of children covered by employment-based insurance, 40.2%, was substantially lower than the state average, and its combined rate of Medi-Cal and Healthy Families, 34.7%, was slightly higher.

Table 14. Health Insurance Coverage of Children Ages 0-18, Lake County, 2007

	Lake County	California
Percent uninsured all or part year	17.9%	6.4%
Percent insured all year, employment-based	40.2%	54.9%
Percent insured all year, Medi-Cal	22.4%	25.8%
Percent insured all year, Healthy Families/CHIP	12.3%	6.7%
Percent insured all year, privately purchased and other	6.8%*	6.1%

Source: 2007 California Health Interview Survey, UCLA Center for Health Policy Research.
* Represents statistically unstable results due to small sample size.

Besides Medi-Cal coverage for children, the state offers the Healthy Families Program—a state and federally funded health insurance program that provides health, dental and vision coverage for children with family incomes above the level eligible for no-cost Medi-Cal and below 250% of the federal poverty level. Like Medi-Cal, eligibility is limited to children who are U.S. citizens, nationals or eligible qualified immigrants. As of September 2009, 1,646 Lake County children age 0-18 were enrolled in Healthy Families.[29]

Health Coverage Reform

The health insurance coverage picture will likely change significantly over the next few years with implementation of the Affordable Healthcare Act (federal healthcare reform), expanding the number of people with coverage and improving the benefits for many who are already insured, including implementation of parity laws for mental health and alcohol and drug services. This is an area of policy development that will require ongoing attention and collaboration among healthcare providers throughout the county.

[29] Healthy Families Program Current Enrollment Distribution by County and Health Plan, Managed Risk Medical Insurance Board, September 2009.

Section II. Selected Health Status Indicators

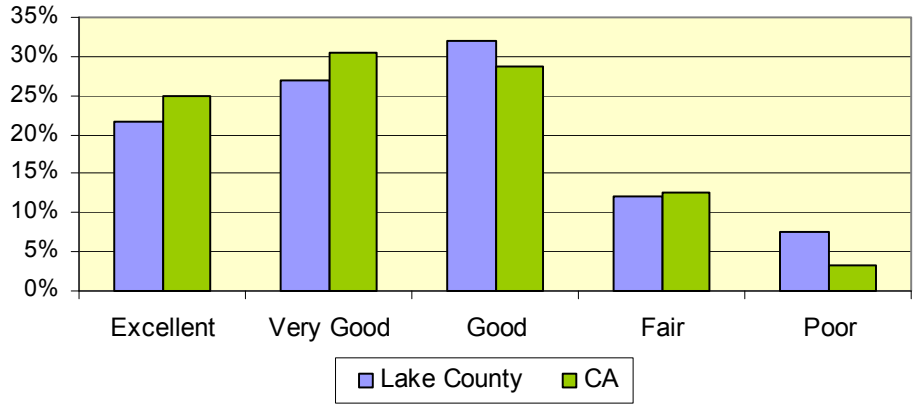
"I just turned 60 and the big health issues are looming. Many of the tests I am supposed to have are not covered by my insurance, and I'm not sure which are the most important."—Key Informant Interview

Health and well-being are influenced by many factors. Health status indicators include the traditional vital statistics, such as birth and death rates, as well as factors such as safety and mental health, and health behaviors such as physical activity. Communities commonly measure their health against statewide averages and national standards or objectives such as Healthy People 2010, a federal health promotion and disease prevention agenda for improving the health of the nation's population.

SELF-RATED HEALTH STATUS

In population studies, self-rated health is generally regarded by researchers as a valid, commonly accepted measure of health status.[30] Understanding the correlates of self-rated health may help health care professionals prioritize health promotion and disease prevention interventions to the needs of the population.[31] One of five (21.6%) Lake County respondents to the 2007 California Health Information Survey rated their health status as "excellent" and 27% as "very good." However, on average, Lake County residents viewed themselves as less healthy than other Californians.

Figure 10. Self-Rated Health Status, Lake County and California, 2007



Source: California Health Information Survey

[30] Franks P, Gold MR, Fiscella K. Sociodemographics, self-rated health, and mortality in the US. *Soc Sci Med*. 2003;56:2505–2514.
[31] Idler, EL., Benyamini, Y. (1997). Self-rated health and mortality: A review of twenty-seven community studies. *J Health Soc Behav,* 38, 21-37.

When the senior population (age 65+) is broken out of the county and statewide data, Lake County seniors rate their health more favorably overall than other California seniors: 73.8% considered their health to be excellent, very good, or good in contrast to 69.4% of California seniors who gave themselves those high ratings.

Table 15. Percent of Population Self-Rated Health Status, Lake County and California, 2007

	Lake County		California	
	All Ages	*Seniors Age 65+*	*All Ages*	*Seniors Age 65+*
Excellent	21.6%	16.0%	25.0%	11.6%
Very good	27.0%	26.1%	30.4%	26.8%
Good	32.0%	31.7%	28.8%	31.0%
Fair	12.0%	17.0%	12.5%	21.9%
Poor	7.5%	9.2%	3.3%	8.7%

Source: 2007 California Health Interview Survey

MORBIDITY (DISEASE CONDITIONS AND ILLNESS)

Newly available county rankings reflect the overall health of counties in California, and provide a snapshot of how healthy residents are by comparing their overall health and the factors that influence their health with other counties in the state. Population health measures were based on scientific relevance, importance, and availability of data at the county level.[32]

Summary rankings for Health Outcomes show Lake County as 55th (of 58) worst in the state on mortality and 45th worst for measures of morbidity of California's 58 counties (Table 16). *Mortality* is a life expectancy measure and *morbidity* is a combination of self-report fair or poor health; poor physical health days; poor mental health days; and the percent of births with low birth weight.

Table 16. Health Outcomes Summary Rankings of California Counties

Health Outcomes			
Rank	**Mortality**	**Rank**	**Morbidity**
55	Lake County	45	Lake County

Data are from the period 2000-2008.
Source: *County Health Rankings. Mobilizing Action Toward Community Health, 2010 California*.

[32] *County Health Rankings. Mobilizing Action Toward Community Health, 2010 California*. University of Wisconsin Population Health Institute.

Summary rankings for Health Factors for Lake County show a wide range. For measures of physical environment, the county ranks almost at the top, 2nd best in the state. For clinical care, it ranks almost in the middle at 31st, and for health behaviors and social/economic factors, the county is 46th and 47th worst in the state, respectively (Table 17). *Health behaviors* include things like smoking and exercise; *clinical care* includes measures of access to medical care; *social and economic* factors include education, employment, and community safety; and *physical environment* is a combination of environmental quality and the "built environment" (human-created or arranged physical objects and places people interact most directly with such as structures and landscapes).

Table 17. Health Factors Summary Rankings of California Counties

Health Factors							
Rank	Health Behaviors	Rank	Clinical Care	Rank	Social/Economic Factors	Rank	Physical Environment
46	Lake County	31	Lake County	47	Lake County	2	Lake County

Data are from the period 2000-2008.
Source: *County Health Rankings. Mobilizing Action Toward Community Health, 2010 California*.

Table 18 displays the incidence or cases of communicable diseases commonly reported for morbidity indicators in community health assessments. The case rates shown in the table are per 100,000 population and show Lake County's rates are more favorable than statewide rates. However, these reported data are 5 years old. According to Lake County Public Health Department preliminary data, Lake County experienced a significant outbreak of gonorrhea in 2009 and 2010. Compared with only 1 reported gonorrhea case in 2008, there were more than 30 cases in 2009.[33]

Table 18. Lake County Morbidity by Cause, 3-Year Average

County Rank Order	Health Status Indicator	2006-2008 Cases (Ave.)	Crude Case Rate	Crude Case Rate		National Objective
				Statewide	National[1]	
19	AIDS Incidence (Age 13+)	1.3	2.4*	11.6	14.4	1.00
21	Tuberculosis incidence	1.3	2.0*	7.2	4.4	1.00
14	Chlamydia incidence	106.3	163.1	377.7	[a]	[b]
16	Gonorrhea incidence	9.7	14.8*	79.7	119.0	19.00

Source: County Health Status Profiles 2010. California Department of Public Health
* Rate or percent unstable; relative standard error greater than or equal to 23%.
[a] National rate is not comparable to California due to rate calculation methods.
[b] Prevalence data were not available in all California counties to evaluate National Objective of >3% testing positive in the population 15-24 years of age.

[33] Personal communication with Karen Tait, MD, Lake County Public Health Officer. August 13, 2010.

Lake County's crude case rate of AIDS decreased from 4.3 in 2003-2005 to 2.4 in 2006-2008 (both rates unstable). The latter rate was lower than the state rate of 11.6 and ranked 19th best among California counties.[34] Between March 1983 and September 2009, the county had a cumulative total of 152 AIDS cases. Of those, 87 (57%) are now deceased. There have been 16 HIV cases reported for Lake County between April 2006 and September 2009.[35] Date of diagnosis for these cases ranges from prior to 1990 through September 2009.

Table 19. Cumulative HIV/AIDS Cases Reported for Lake County as of September 30, 2009

HIV				AIDS			
Total Cases	Living Cases	Deceased		Total Cases	Living Cases	Deceased	
		Number	%			Number	%
16	15	1	6	153	65	88	58

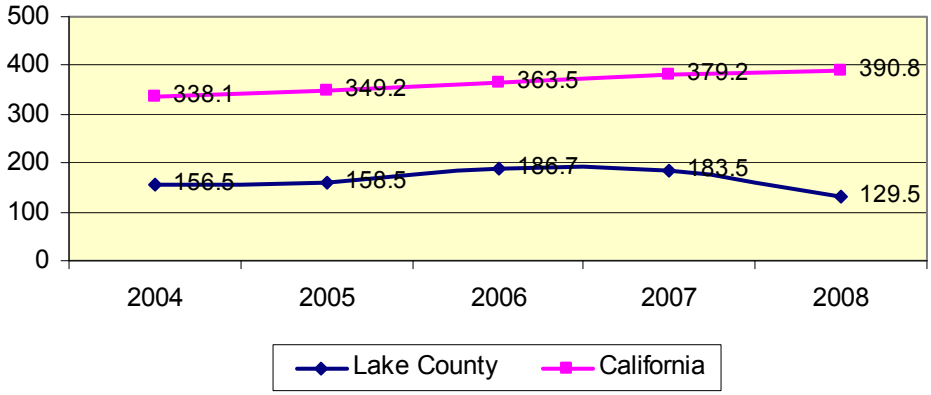
AIDS reporting began in March 1983. HIV reporting began in April 2006.
Counts exclude cases diagnosed, but not yet reported as of September 30, 2009 and may understate the number of diagnoses and deaths in the most recent years.
Source: California Department of Public Health, Office of AIDS.

Chlamydia, a bacterial disease, often has no symptoms, and people who are infected may unknowingly pass the disease to sexual partners. While treatable, Chlamydia can lead to infertility, and like gonorrhea and syphilis, can have long-lasting consequences for women. Newborns can also contract it from their infected mothers at the time of birth. Prior untreated Chlamydia infection is one of the most common causes of infertility.[36]

Lake County's case rate of Chlamydia is lower than the statewide rate (Figure 11 on the next page), and it improved from the three-year average in 2003-2005 (173.6) to 2006-2008 (163.1). The county ranked 14th best in the state in 2006-2008.[37]

[34] County Health Status Profiles 2010. California Department of Public Health. http://www.cdph.ca.gov/programs/ohir/Pages/CHSP.aspx (April 2010)
[35] California Department of Public Health. Office of AIDS. HIV/AIDS Quarterly Statistics. http://www.cdph.ca.gov/data/statistics/Pages/OA2009MonthlyStatistics.aspx (April 2010)
[36] Haggerty CL, et al. Risk of sequelae after Chlamydia trachomatis, genital infection in women. *J Infect Dis* 2010;201:134-155.
[37] County Health Status Profiles 2010. California Department of Public Health. http://www.cdph.ca.gov/programs/ohir/Pages/CHSP.aspx (April 2010)

Figure 11. Chlamydia Case Rate Per 1,000 Population, 2004-2008



Source: California Department of Public Health, STD Control Branch, 2010

Lake County's case rate (per 100,000 population) for tuberculosis is relatively low compared to California. Because the number of cases each year is small, it is difficult to detect trends over time. Lake County's case rate (per 100,000 population) for tuberculosis is lower than the state's rate, 2.0 (statistically unstable) in 2006-2008 compared to 7.2. Like California and the rest of the nation, the county has seen an overall decrease in cases since the mid 1990's, though the decline has leveled off in recent years. It had the 21st lowest rate of tuberculosis cases out of 58 counties in 2006-2008.[38]

MORTALITY (DEATH)

Mortality statistics are the backbone of public health. Without knowing how the members of a population die, and at what ages, epidemiologists can only guess how many deaths are potentially preventable. Good mortality data can identify overlooked problems and help health organizations decide where to direct effort and money.[39]

The leading causes of mortality (Table 20 on the next page) present a broad picture of the causes of death in Lake County. The death rates shown are per 100,000 population. The crude death rate is the actual risk of dying. The age-adjusted rate is the hypothetical rate that the county would have if its population were distributed by age in the same proportions as the 2000 U.S. population. The shaded rows in the table—some of which contain "statistically unstable" rates, unavoidable because of small

[38] Ibid.
[39] Brown, D. Health and Science. *Washington Post*. Reprinted September 18, 2010.

sample sizes—highlight the death rates where Lake County is reported to exceed state, national, or National Health Objective rates

Table 20. Lake County Deaths by Cause, 3-Year Average

Lake County Rank Order	Health Status Indicator	2006-2008 # of Deaths (3-yr avg)	Crude Death Rate	Age-Adjusted Death Rate	Age-Adjusted Death Rate		National Health Objective
					Statewide	National[1]	
52	All causes	784	1203	847	666	760	[a]
52	All cancers	182	279	179	156	178	158.6
47	Colorectal (colon) cancer	16	24	16*	15	17	13.7
53	Lung cancer	58	89	57	38	51	43.3
5	Female breast cancer	7	20*	12*	21	23[2]	21.3
15	Prostate cancer	8	26*	19*	22	24	28.2
21	Diabetes	16	24*	16*	21	22	[b]
22	Alzheimer's disease	17	27*	18*	26	23	[a]
46	Coronary heart disease	146	224	150	137	191	162.0
41	Cerebrovascular disease (stroke)	44	68	46	41	42	50.0
32	Influenza/pneumonia	17	26*	18*	20	16	[a]
53	Chronic lower respiratory disease	61	94	61	38	41	[a]
56	Chronic liver disease and cirrhosis	20	31	22*	11	9	3.2
56	Unintentional injuries	51	78	68	30	38	17.1
52	Motor vehicle crashes	16	25*	22*	10	14	8.0
57	Suicide	18	28*	29*	9	11	4.8
48	Homicide	5	7*	7*	6	6	2.8
50	Firearms-related	10	15*	13*	9	10	3.6
53	Drug-induced deaths	19	30	28*	11	10	1.2

Source: County Health Status Profiles 2010. California Department of Public Health.
The shaded rows in the table highlight the death rates where Lake County exceeds state, national, or National Objective rates.
* Death rate unstable, relative standard error is greater than or equal to 23%.
[1] :Preliminary data for 2007. National vital statistics reports; vol 58 no 1. Hyattsville, MD: National Center for Health Statistics. 2009.
[2] State Cancer Profiles. National Cancer Institute. http://statecancerprofiles.cancer.gov/cgi-bin/deathrates/deathrates.pl?00&055&00&2&001&1&1&1 (April 2010)
[a] Healthy People 2010 National Objective has not been established
[b] National Objective is based on both underlying and contributing cause of death which requires use of multiple cause of death data files. California's data exclude multiple/contributing causes of death.

In 2006-2008, Lake County's overall death rate was higher than the state's and 52nd highest of 58 counties. Diseases of the circulatory system—coronary heart disease and stroke—are responsible for 24% of Lake County's deaths. Death rates due to both causes have met Healthy People (HP) 2010 objectives, but are higher than state rates.

Cancer is the leading cause of death in Lake County—accounting for about 1 out of every 4 deaths. The county has the 52nd highest death rate due to cancer in the state and is higher than both the statewide rate and the HP 2010 national objective. The rate of death from lung cancer is substantially higher than the state rate (Table 20 above).

Over 30% of cancer is estimated to be associated with diet and obesity; and another 30% with tobacco use.[40] Death from cancers of the trachea, bronchus and lung lead all other types of cancer. Table 21 breaks out mortality data by type of cancer and shows that Lake County's death rates due to all cancers combined and lung cancer are worse than national health objectives and statewide rates. While statistically unstable, the rate for colorectal cancer appears to be more on par, and that for female breast cancer appears to be lower.

Table 21. Deaths Due to Cancer by Type of Cancer, 2006-2008

Type	Lake County				California	National Objective
	2006-2008 # of Deaths (3-yr avg)	Crude Death Rate	Age-Adjusted Death Rate	Rank Order	Age-Adjusted Death Rate	
All cancers	182	279	179	52	156	158.6
Lung	58	89	57	53	38	43.3
Colorectal (colon)	16	24	16*	47	15	13.7
Female breast	7	20*	12*	5	21	21.3

Source: County Health Status Profiles 2010. California Department of Public Health.

Other causes for which Lake County's death rates exceed the state rate or HP 2010 objectives substantially are unintentional injuries (4 times the HP objective), chronic lower respiratory disease and chronic liver disease and cirrhosis.

Primarily attributed to excessive alcohol consumption, liver disease and cirrhosis was the ninth leading cause of death in California and the eighth in Lake County for the 2006-2008 three year period.[41] The county's age-adjusted death rate, 22 (unstable) per 100,000, was about 7 times higher than the HP 2010 objective for the nation, which is 3 per 100,000.[42]

Lake County's rates of suicide (57th worst in state) and drug-induced deaths (53rd worst) also appear to be higher than the state as a whole.

[40] *California Cancer Facts and Figures, 2010*. California Cancer Registry, California Department of Health Services, and American Cancer Society. http://www.ccrcal.org/Publications.html (April 2010)
[41] County Health Status Profiles 2010. California Department of Public Health. http://www.cdph.ca.gov/programs/ohir/Pages/CHSP.aspx (April 2010)
[42] Ibid.

CHRONIC DISEASE AND OTHER CONDITIONS

Chronic diseases (e.g., cancer, diabetes, heart disease) cost the nation's economy more than $1 trillion a year in lost productivity and treatment costs and the amount could soar to $6 trillion by mid-century according to new figures on the cost burden of chronic disease. [43] The researchers—who conducted a state-by-state analysis of 7 common chronic diseases (e.g., cancer, diabetes, heart disease)—concluded that "investing in good health would add billions of dollars in economic growth in the coming decades." California was in the top quartile of states with the lowest rates of chronic diseases. According to California Health Interview Survey data, Kern County and Lake County reported the highest burden of chronic health conditions statewide in 2005 and 2007, respectively.[44]

Heart Disease

"Heart disease" refers to a variety of conditions including coronary artery disease, heart attack, heart failure, and angina. Smoking, being overweight or physically inactive, and having high cholesterol, high blood pressure, or diabetes are risk factors that can increase the chances of having heart disease. In addition, heart disease is a major cause of chronic illness.

Lake County's 2006-2008 three-year average, age-adjusted death rate from coronary heart disease was 149.8 per 100,000 population, 46th highest of the 58 counties.[45] While higher than the state rate of 137.1, Lake County's death rate is lower than the Healthy People 2010 objective of 162.

According to the 2007 California Health Interview Survey, 10.3% of Lake County residents have been diagnosed with heart disease, compared to 6.3% statewide (Table 22 on the next page).[46] In 2004, 2.7% of Lake County residents were hospitalized due to heart disease, compared to 1.7% statewide.[47]

[43] DeVol R, et al. An Unhealthy America: The Economic Burden of Chronic Disease. Milken Institute. October 2, 2007.
[44] Lui C, Wallace SP. *Chronic Conditions of Californians*. California Healthcare Foundation. March 2010.
[45] County Health Status Profiles 2010. California Department of Public Health. http://www.cdph.ca.gov/programs/ohir/Pages/CHSP.aspx (April 2010)
[46] California Health Interview Survey, 2007. UCLA Center for Health Policy Research
[47] California Heart Disease and Stroke Prevention and Treatment Task Force. California's Master Plan for Heart Disease and Stroke Prevention and Treatment. California Department of Public Health. July 2007. http://www.cdph.ca.gov/search/results.aspx?k=prevalence%20heart%20disease (April 2010)

Table 22. Percent of Adults Who Self-Reported Ever Being Diagnosed With Heart Disease

Reporting Period	Lake County	California
2003	10.1%	6.9%
2005	11.9%	6.2%
2007	10.3%	6.3%

Source: California Health Interview Survey, 2003, 2005, 2007

Diabetes

The prevalence of diabetes continues to grow nationwide, and it poses a significant public health challenge. It increases the risk of cardiovascular disease, and the direct complications—blindness, lower limb amputation and end-stage kidney failure—increase as the prevalence of diabetes increases.[48]

More than one out of ten California adults has diabetes, a 38% increase in one decade, and one in three has pre-diabetes.[49] The prevalence of gestational diabetes has increased 60% in seven years, and research shows increasing diabetes in children and youth. Direct medical costs for the disease (e.g., hospitalizations, medical care, and treatment supplies) in California account for about $18.7 billion annually, with another $5.8 billion spent on indirect costs such as disability payments, time lost from work, and premature death.[50] Similar to other chronic conditions, access to health care and disease management are key factors in reducing the burden of diabetes.

Obesity is a major risk factor for the development of diabetic complications, including cardiovascular disease and stroke. The prevalence of diabetes is more than twice as high among adults who are obese as it is among those who are overweight.[51] Diabetes is also strongly related to social and economic factors. It is more than twice as common among adults who either did not attend or did not graduate from high school, compared to college graduates.

In 2002, a national clinical trial demonstrated that type 2 diabetes can be delayed or prevented by healthful lifestyle changes, including moderate weight loss and regular, moderate-intensity physical activity.[52]

Lake County has a total of 50,309 adults; among those, 3,421 self-reported as having diabetes.[53] In both Lake County and California, according to the California Health

[48] National Diabetes Fact Sheet, United States Department of Health and Human Services, p. 7-8.
[49] Diabetes in California Counties 2009. California Diabetes Program. http://www.caldiabetes.org/content_display.cfm?contentID=1160 (April 2010)
[50] Ibid.
[51] California Health Interview Surveys, *Diabetes on the Rise in California*, Health Policy Brief, December 2005.
[52] Diabetes in California Counties 2009. California Diabetes Program. http://www.caldiabetes.org/content_display.cfm?contentID=1160 (April 2010)
[53] Ibid.

Interview Survey (CHIS), the proportion of the adult population that has diabetes increased from 2005 to 2007 (Table 23).[54]

Table 23. Diabetes , Adults Age 18 and Older

Area	Has Diabetes			Diagnosed Borderline or Pre-Diabetes		
	2003	2005	2007	2003	2005	2007
Lake County	9.5%	6.8%	9.7%	*	1.5%**	*
California	6.6%	7.0%	7.8%	0.8%	1.1%	1.5%

Source: California Health Interview Survey, 2003, 2005, 2007.
*Estimate is less than 500 people.
**Statistically unstable.

In 2007, Lake County's age-adjusted rate of diabetes, which was slightly lower than the State rate, ranked higher among most of the 20 Northern and Sierra Counties in which it is grouped.[55] Neither the State nor Lake County achieved the Healthy People 2010 national objective of a diabetes prevalence rate of 2.5% (Table 24).

Table 24. Prevalence Rates[1] of Diabetes in Adults Age 18 and Older, 2007

	Age-Adjusted Rate
Healthy People 2010 Objective	2.5
Lake County	7.4
California	7.5

Source: 2007 California Health Interview Survey.
[1]Rate is per 100 county or State population.
*Age-adjusted rate is significantly different from age-adjusted State rate.

Mirroring California, Lake County's prevalence and diabetes risk factors vary by race/ethnicity, age and gender (Table 25 on the next page). (Note that for risk factors, table results refer to the percentage of people with diabetes that have that risk factor.) In 2005, 17.7% of African Americans in Lake County had diabetes, 7.2% of Whites, and 5.8% of Latinos.[56]

[54] California Health Interview Survey, UCLA Center for Health Policy.
[55] *Obesity and Diabetes: Two Growing Epidemics in California*. UCLA Center for Health Policy Research. August 2010.
[56] Diabetes in California Counties 2009. California Diabetes Program. http://www.caldiabetes.org/content_display.cfm?contentID=1160 (April 2010)

Although county-level prevalence data for Native Americans are not available in this dataset, statewide studies show that almost one-third (30%) of American Indian elders age 55 and over have been diagnosed with diabetes, the highest prevalence of any racial group and over twice the 13% rate of whites.[57] This finding has special significance in Lake County as its percentage of Native Americans is twice the statewide proportion.

The following notable risk factor data concerning persons who are current smokers, overweight, obese, do not participate in regular physical activity, or consume less than five servings of fruits and vegetables a day among current diabetics in Lake County are highlighted by shaded cells in Table 25 with some of those findings listed below:[58]

- 14% of female diabetics are current smokers compared to <1% of male diabetics
- Close to 100% of diabetics ages 18-44 are reported to be overweight
- Almost half of all diabetics are obese: 56% of female diabetics and close to 100% of diabetics ages 45-64
- Almost 1 in 3 male diabetics are physically inactive
- Over half of diabetics eat less than 5 servings of fruits and vegetables a day

Table 25. Lake County Diabetes Prevalence and Risk Factors among those with Diabetes, 2005

	Diabetes Prevalence	Current Smoking	Overweight	Obese	Physical Inactivity[1]	Less-than-5-A-Day[2]
	%	%	%	%	%	%
Countywide	6.8	9.9	40.9	45.8	15.5	52.4
Female	9.0	14.4	40.1	56.3	7.8	54.5
Male	4.5	*	42.6	23.3	32.1	47.8
Latino	5.8	*	*	*	*	*
Asian	*	*	*	*	*	*
African American	17.7	*	*	*	*	*
White	7.2	11.2	36.8	48.2	17.6	57.0
18-44	2.5	*	100.0	*	*	*
45-64	6.8	25.7	0.0	100.0	9.7	60.5
65+	13.7	*	56.7	15.6	24.6	61.0

Source: California Diabetes Program. (2009). Diabetes in California Counties. Sacramento, CA: California Diabetes Program, California Department of Public Health; University of California San Francisco, Institute for Health and Aging.
Based on the 2005 CHIS.
[1]Physical Inactivity is defined as less than 20 min. of vigorous exercise 3/week or 30 min. of moderate activity 5/week.
[2]Less-than-5-A-Day refers to the consumption of 4 or less fruits and vegetables per day.
*Insufficient number of observations to make a statistically reliable estimate.

[57] Satter DE, et al. *Health of American Indian and Alaska Native Elders in California*. June 2010. Available at http://www.healthpolicy.ucla.edu/nativeelders.
[58] Diabetes in California Counties 2009. California Diabetes Program. http://www.caldiabetes.org/content_display.cfm?contentID=1160 (April 2010)

Overweight and Obesity

Overweight and obesity, which are often caused by an interdependence of dietary factors and physical inactivity, are becoming epidemic in the population and are associated with an increased risk for a number of serious health conditions. On average, higher body weights are associated with higher death rates. Rates of chronic disease and disability associated with poor diet and inactivity continue to rise each year. The public health impact of overweight and obesity is substantial, both in terms of disease burden and cost. It is estimated that obesity-related health expenditures accounted for more than a quarter of the growth in national health care spending between 1987 and 2001.[59] In California, the projected cost of physical inactivity, obesity and overweight in 2005 was $28 billion for health care and lost work productivity.[60]

Over half of all Californians are at increased risk for heart disease, type 2 diabetes, high blood pressure, stroke, arthritis-related disabilities, depression, sleep disorders, and some cancers.[61] And, there is considerable variation in the prevalence of overweight and obesity by race and ethnicity. While obesity affects nearly all age, income, educational, ethnic, and disability groups, rates are highest among Californians of Latino, American Indian, African American and Pacific Islander descent with lower incomes and disabilities.[62] By the preschool years, racial/ethnic disparities in obesity prevalence are already present. While family income and cultural customs and beliefs are often factors, new studies show minority children at higher risk than whites for early-life risk factors known to be associated with obesity: mothers smoking during pregnancy, starting solid food before 4 months; allowing very young children to have sugary drinks, fast food and/or TVs in their room.[63]

In 2007, 29% of adults in Lake County were obese compared to 23% statewide (Table 26). Neither the county nor the state has met the Healthy People 2010 national objective of 15%. Only one-third of adults in the county are of healthy weight compared to 41% statewide, both considerably lower than the HP 2010 goal of 60%.

Table 26. Adult Prevalence of Healthy Weight and Obesity, 2001 & 2007

	Lake County		California		HP 2010
	2001	2007	2001	2007	
Healthy weight (BMI >18.5 and BMI <25.0)	33.4%	33.5%	43.0%	40.7%	60.0%
Obese (BMI>30.0)	26.1%	28.8%	19.3%	22.7%	15.0%

Source: California Health Interview Survey.

[59] California Obesity Prevention Plan: A Vision for Tomorrow, Strategic Actions for Today. Sacramento (CA): Department of Health Services; 2006. http://www.cdph.ca.gov/programs/Pages/CO-OP.aspx (April 2010)
[60] Ibid.
[61] California Obesity Prevention Plan: A Vision for Tomorrow, Strategic Actions for Today.
[62] Ibid.
[63] Taveras EM, et al. Racial/ethnic differences in early-life risk factors for childhood obesity. *Pediatrics*. April 2010;125(4):686-695.

Overweight and obesity have long been known to complicate pregnancy and have an effect on birth outcomes. Babies born to obese women are nearly three times more likely to die within the first month of birth than women of normal weight, and obese women are almost twice as likely to have a stillbirth.[64] Very obese women are also three to four times as likely to deliver their first baby by Caesarean section as first-time mothers of normal weight.[65] Although the associations are still not understood, infants born to obese mothers are one-third more likely to suffer significant birth defects, including spina bifida, limb reductions and heart defects according to recent research on maternal obesity.[66]

The rapid increase in overweight among children and adolescents is generating widespread concern. Over the past 20 years, the rate of overweight has doubled in children and tripled in teens nationally.[67] This rapid increase has generated widespread concern, as overweight and obesity are major risk factors for chronic diseases. Obese children are more than twice as likely to have type 2 diabetes, once seen only in adults, than children of normal weight. They are more likely to have risk factors for cardiovascular disease, including high cholesterol levels, high blood pressure, and abnormal glucose tolerance. The risk of new-onset asthma is also higher among children who are overweight.[68]

According to 2008-09 California Physical Fitness Test data, the percentage of children in Lake County in grades 5, 7, and 9 considered overweight (based on body composition factors) were 33.2%, 30.7%, and 31.1%, respectively.[69] These rates closely mirror the statewide averages for students tested in these grades.

According to emerging research, one of the potential explanations for why puberty is starting earlier, particularly for Latina girls, is the increase in average body weight among children over the last 3 decades. Studies linking poor diet and childhood obesity suggest the heavier girls are at about age 7 or 8, the earlier they enter puberty,[70,71] a change that puts them at higher risk for breast cancer and risky behaviors which can result in unplanned pregnancies.[72]

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[64] Hollander D. The more obese a woman is, the greater her risk of having a stillbirth. *Perspectives on Sexual and Reproductive Health*. March 2008.
[65] Vahratian A, Siega-Riz AM, Savitz DA, Zhang J. Maternal pre-pregnancy overweight and obesity and the risk of cesarean delivery in nulliparous women. *Ann Epidemiol.* 2005;15(7):467-74.
[66] Waller DK, et. al. Pregnancy obesity as a risk factor for structural birth defects. *Archives of Pediatric and Adolescent Medicine.* 2007;161:745-750.
[67] California Obesity Prevention Plan: A Vision for Tomorrow, Strategic Actions for Today, Sacramento (CA): Department of Health Services; 2006. http://www.cdph.ca.gov/programs/Pages/CO-OP.aspx (April 2010)
[68] Gilliland FD, Berhane K, et al. Obesity and the risk of newly diagnosed asthma in school-age children. *Am J Epidemiol.* 2003;158:406-415.
[69] 2008-09 California Physical Fitness Report. http://data1.cde.ca.gov/dataquest/PhysFitness/PFTestCo2007.asp.
[70] Biro F, et al. Pubertal assessment method and baseline characteristics in a mixed longitudinal study of girls. *Pediatrics* August 2010.
[71] Davison KK, et al. Percent body fat at age 5 predicts earlier pubertal development among girls at age 9. *Pediatrics* April 2003;111(4):815-821.
[72] Kadlubar FF, et al. The CYP3A4*1B variant is related to the onset of puberty, a known risk factor for the development of breast cancer. *Cancer Epidemiology, Biomarkers & Prevention* April 2003;12:327-331.

Breastfeeding Rate

Interventions aimed at childhood obesity typically target school-age children, but prevention should start much earlier, as early as the day the child is born according to pediatric experts. Breast milk not only provides infants with all the nutrients they need and elements that promote growth and a healthy immune system, but is also recognized as the first step in the battle against childhood overweight.[73] Mothers who breastfeed exclusively (breast milk is the infant's only food) are likely to breastfeed for a longer time—offering the best protection against overweight.

Statewide in 2007, about 87% of mothers chose to breastfeed their infants in the hospital; with 43% breastfeeding exclusively.[74] Lake County's overall rates (89.2%) are on par with the state (Table 27).

Table 27. Breastfeeding of Newborns, by Breastfeeding Status

Breastfeeding Status	2003	2004	2005	2006	2007
Exclusive Breastfeeding	51.3%	56.6%	47.4%	48.6%	47.5%
Any Breastfeeding	87.2%	87.9%	87.4%	87.8%	89.2%

As cited on kidsdata.org, California Department of Public Health, Center for Family Health, Genetic Disease Screening Program, Newborn Screening Data, 2003-2007. Accessed at: http://www.cdph.ca.gov/data/statistics/Pages/BreastfeedingStatistics.aspx (March 5, 2009).

In 2007, 90% of mothers did some breastfeeding in the hospital. The county ranked 36th lowest out of 58 counties on exclusive breastfeeding, with only 42% doing so. As shown in Table 28, rates vary by race/ethnicity. White women in Lake County breastfeed exclusively at a considerably lower rate than statewide, 48% compared to 64%. Only a third of Hispanic mothers in the county breastfeed exclusively. The Healthy People 2010 objective is for 75% of mothers to breastfeed in the early post-delivery period and 50% to still be breastfeeding when the baby is six months old.

Table 28. Percentage In-Hospital Exclusive Breastfeeding by Race/Ethnicity

Ethnicity	Lake County	State Average
Hispanic	32.6	32.4
White	47.8	63.6
Total	42.2	42.7

Source: CA Hospital Breastfeeding Report 2008. County Fact Sheets. California WIC Association.

[73] Owen CG, et al. Effect on infant feeding on the risk of obesity across the life course: A quantitative review of published evidence. *Pediatrics* 2005; 115:1367-1377.
[74] CA Hospital Breastfeeding Report 2008. County Fact Sheets. California WIC Association. http://calwic.org/bfreport_county_2008.aspx (March 2010)

Asthma

Asthma is a serious public health problem and is responsible for millions of outpatient visits and hundreds of thousands of hospitalizations nationally. Costs for asthma hospitalizations are very high: total charges in 2005 in California were $763 million.[75] A combination of factors work together to cause asthma to develop, most often early in life, and particular "triggers" such as exposure to pets can make symptoms worse. Besides family genes, certain environmental exposures increase the risk. For example, lower levels than previously thought of ozone and common particle pollutants (discussed later in this report) can trigger asthma attacks, and have been shown to increase the risk of emergency room visits and hospital admissions for asthma.[76]

While not negating the importance of avoiding allergen triggers, it is worth noting research that speaks to the protective effects of certain types of exposures when children are young, such as growing up on a farm.[77] According to some studies, the modern emphasis on cleanliness or "sanitizing the environment" may have reduced this natural immunotherapy over the past century and might be a factor in the global increase of these conditions.[78]

In Lake County, approximately 12,000 children and adults have been diagnosed with asthma.[79] According to the National Health Interview Survey, young people under age 18 have higher rates of asthma than any other age group.[80] In 2007, 15.4% of young people under age 18 in California had ever been diagnosed with asthma. Lake County's rate of 16% was very close.[81]

According to the 2007 California Health Interview Survey, all Lake County children and adolescents with asthma experienced asthma symptoms in the preceding year, compared to 89% in California (Table 29 on the next page). This suggests that a larger proportion of the county's children and adolescents than the state average may be at risk for serious illness and other complications associated with asthma, such as activity limitations and missed days of school.

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[75] Milet M, Tran S, Eatherton M, Flattery J, Kreutzer R. "The Burden of Asthma in California: A Surveillance Report." Richmond, CA: California Department of Health Services, Environmental Health Investigations Branch, June 2007.
[76] Meg Y-Y, Rull RP, Wilhelm M, et al. Outdoor air pollution and uncontrolled asthma in the San Joaquin Valley, California. *J Epidem & Comm Health*.2010; 64: 142-147.
[77] Von Essen S. The role of farm exposures in occupational asthma and allergy. *Curr Opin Allergy Clin Immunol* 2001;1(2):151–6.
[78] Liu AH, Murphy JR. Hygiene hypothesis: fact or fiction? *J Allergy Clin Immunol 2003;*111(3):471–8.
[79] California Breathing.org. Lake County Asthma Profile, July 2008 http://www.californiabreathing.org/index.php?option=com_content&task=view&id=34&Itemid=44 (March 2010)
[80] National Center for Health Statistics. "Asthma Prevalence, Health Care Use and Mortality." URL: http://www.cdc.gov/nchs/products/pubs/pubd/hestats/asthma/asthma.htm
[81] California Health Interview Survey, 2007. UCLA Center for Health Policy Research

Table 29. Lifetime Asthma,[1] Children and Adolescents, 2003 & 2007

	Lifetime Asthma in California Children and Adolescents, 2003 & 2007		Children and Adolescents Experiencing Asthma Symptoms Within the Past Year, 2003 & 2007	
	2003	2007	2003	2007
Lake County	11.1%[2]	16.0%	80.8%[2]	100.0%
California	15.4%	15.4%	92.3%	89.4%

Source: California Health Interview Survey, 2003 & 2007
[1]Individuals with "lifetime asthma" have ever been told by a doctor that they have asthma.
[2]Statistically unstable

Table 30 shows the percent of Lake County residents, by age group, that have ever been diagnosed with asthma and, of those, the percent that reported, in the 2007 California Health Interview Survey, experiencing symptoms within the past 12 months. About the same proportion of young people under age 18 and adults aged 18-64 have ever been diagnosed with asthma. In both children and adults, being overweight is associated with higher asthma prevalence.[82]

Table 30. Lake County Residents Ever Diagnosed with Asthma, 2007

Age Group	Percent Ever Diagnosed with Asthma	Percent with Asthma who had Symptoms in Previous 12 Months
0-17	16.0%	100.0%
18-64	16.6%	94.5%
65+	10.5%	95.1%

Source: California Health Interview Survey, 2007.

When people manage their asthma properly and receive appropriate health care, they should not have to go to the emergency department (ED) for treatment. However, many still do. In 2006, there were 448 asthma-related ED visits in Lake County that did not result in inpatient hospitalization.

Table 31 on the next page compares the county's rate of ED visits for people under and over age 18 to statewide rates. The rate of visits for young people was higher than the state rate—the 12th highest of 58 counties. For people over 18, Lake County's rate was the 2nd worst in the state and about twice the statewide average.[83] Lake County's overall rate of asthma *hospitalizations*, 10.4 per 10,000, is higher than the state rate of 9.1 and 11th worst in the state.

[82] Milet M, Tran S, Eatherton M, Flattery J, Kreutzer R. "The Burden of Asthma in California: A Surveillance Report." Richmond, CA: California Department of Health Services, Environmental Health Investigations Branch, June 2007.
[83] California Breathing.org. Lake County Asthma Profile, July 2008 http://www.californiabreathing.org/index.php?option=com_content&task=view&id=34&Itemid=44 (March 2010)

Table 31. Asthma Related ED Visits, 2006

Age Group	Lake Number	Lake Rate (per 10,000)	CA Rate
0-17	118	83.6	68.0
18+	330	73.4	35.8

Source: Lake County Asthma Profile, July 2008, California Breathing.

Alzheimer's Disease

Dementia is characterized by the loss or decline in memory and one of at least a couple of other cognitive abilities. Alzheimer's disease is the most common cause of dementia,[84] and the 7th leading cause of death in the U.S. in 2006.[85] More women than men have dementia, primarily because women live longer, on average, than men. This longer life expectancy increases the time during which women could develop Alzheimer's or other dementia.[86]

Similar to other health disparities, emerging research suggests prevalence rates of Alzheimer's are higher, on average, among African American and Latino adults than among whites, and among older than younger seniors in these racial/ethnic groups.[87,88]

Estimates from different studies on the prevalence and characteristics of people with Alzheimer's and other dementias vary depending on how each study was conducted. Because there are no local data, projections can be helpful for planning purposes. Applying national prevalence estimates of 13% of people aged 65 and older with Alzheimer's disease,[89] approximately 1,375 of residents in Lake County would be *projected* to have Alzheimer's.

Lake County's proportionately older population (approximately 1.5% of the population in California is age 85 or above, while in Lake County 1.8% of the population is ≥ 85)[90] will mean more cases (and greater need for services) since age is the largest risk factor. The increased numbers of people with Alzheimer's will have a marked impact on local healthcare systems—they are high users of health care, long-term care, and hospice—as well as families and caregivers.

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[84] *Alzheimer's Disease Facts and Figures 2010*. Alzheimer's Association. www.alz.org.
[85] Heron MP, Hoyert DL, Xu J, Scott C, Tejada-Vera B. "Deaths: Preliminary data for 2006," National Vital Statistics Reports Vol. 56, No. 16., Hyattsville, Md.: National Center for Health Statistics, 2008.
[86] Plassman BL, Langa KM, Fisher GG, Heeringa SG, Weir DR, Ofstedal MB, et al. "Prevalence of dementia in the United States: The Aging, Demographics and Memory Study." Neuroepidemiology 2007;29:125–132.
[87] Dilworth-Anderson P, Hendrie HC, Manly JJ, Khachaturian AS, Fazio S. "Diagnosis and assessment of Alzheimer's disease in diverse populations." *Alzheimer's & Dementia* 2008;4:305–309.
[88] Manly JJ, Mayeux R. "Ethnic differences in dementia and Alzheimer's disease." In Anderson NA, Bulatao RA, Cohen B. (eds.). Critical perspectives on racial and ethnic differentials in health in late life (pp. 95–141). Washington, D.C.: National Academies Press, 2004.
[89] *Alzheimer's Disease Facts and Figures 2010*. Alzheimer's Association. www.alz.org.
[90] California Department of Finance, Race/Ethnic Population Estimates with Age and Sex Detail, 2008.

MATERNAL HEALTH

Prenatal Care

Early initiation of and adequate prenatal care are associated with improved birth outcomes. The national objective for births to mothers with "adequate/adequate plus" care (which includes timing of entry into prenatal care) is 90%. Only one California county (Marin) met this objective in the latest 3-year reporting period. While an improvement from 65.9% in 2003-2005, only 67.5% of Lake County women received adequate/adequate plus prenatal care during 2006-2008 (3-year average). The county's rate is worse than the statewide rate of 78.7% and ranks 49th lowest in the state.[91]

Births

Approximately 728 babies were born in 2008 to women living in Lake County.* Birth projections through 2015 show a slight but steady increase (Table 32), which is likely attributable to the county's overall growth in population size. Similar to the majority of the state, the growth will be disproportionately higher among the Latino and certain Asian/Pacific Islander populations.

Table 32. Actual and Projected Births, Lake County, 2005-2015

Actual	
2005	728
2006	695
2007	742
2008	705
Projected	
2009	705
2010	714
2011	721
2012	730
2013	738
2014	747
2015	755

Source: Years 2005-2008: California Department of Public Health. County Birth Statistical Data Tables Years 2009-2015: California Department of Finance, County Birth Projections, 2009 Series.

[91] County Health Status Profiles 2010. California Department of Public Health. http://www.cdph.ca.gov/programs/ohir/Pages/CHSP.aspx (April 2010)

* Births are reported by county of residence of mother not county of facility where the birth occurred.

In 2006 in Lake County, close to two-thirds (65.6%) of births were paid primarily by Medi-Cal compared to fewer than half statewide (46.9%).[92]

Adolescent Pregnancy

Lake County's three-year average adolescent birth rate (per 1,000 female population) was 42.7 in 2006-2008, up from the 2003-2005 rate of 36.9, and higher than the statewide rate of 36.6, ranking Lake County 43rd highest among California's 58 counties (Table 33).[93] Nationally, the pregnancy rate among 15-19 year olds increased 3% between 2005 and 2006—the first jump since 1990, according to an analysis of the most recent data collected.[94] While no national objective has been established for this indicator, the national target for *pregnancies* (as opposed to births) among adolescent females is 43 pregnancies per 1,000.

Table 33. Births to Teen Mothers 15-19 Years of Age

Area	2007 Female Population 15-19 Yrs Old	2006-2008 Live Births (3 yr average)	Age-Specific Birth Rate (per 1,000 female population)
Lake County	2,379	102	42.7
California	1,438,740	52,622	36.6

Source: County Health Status Profiles 2010. California Department of Public Health.

Children of teen mothers are more likely to display poor health and social outcomes than those of older mothers, such as premature birth, low birth weight, higher rates of abuse and neglect, and greater likelihood of entering foster care or doing poorly in school.

Infant Mortality

Infant mortality rates are used to compare the health and well-being of populations across and within countries. The infant mortality rate—the rate at which babies less than one year of age die—has continued to steadily decline in the U.S. and California over the past several decades. Nationally as well as statewide, however, African

[92] Improved Perinatal Outcome Data Reports, Lake County Profile, 2006. http://ipodr.org/055/vs/socioeconomics.html#tablenohs (April 2010)
[93] County Health Status Profiles 2010. California Department of Public Health. http://www.cdph.ca.gov/programs/ohir/Pages/CHSP.aspx (April 2010). It is important to note that because the total number of teen births in Lake County is relatively small, due to the County's small population, a difference in the number of births of only 1 or 2 babies (or a set of twins) more or less can affect percentages, and thereby suggest a trend which does not exist.
[94] *U.S. Teenage Pregnancies, Births and Abortions: National and State Trends and Trends by Race and Ethnicity.* Guttmacher Institute January 2010. www.guttmacher.org.

American infant death rates are significantly higher than both White non-Hispanic and Hispanic infants which are similar to one another. Because the number of infant deaths for most counties in California is too small to calculate reliable rates, the rate of infants born with low birth weight (less than 2500 grams at birth) is often used instead.

Low Infant Birth Weight

Lake County's 2006-2008 3-year average low birth weight rate was 5.9%, slightly better than the statewide rate of 6.9% and better than its 2003-2005 rate of 6.5% (Table 34). Neither the county nor the state met the national Healthy People objective of 5%, and the county ranked 21st lowest among the 58 counties.[95]

Table 34. Low Birth Weight Infants

Area	2006-2008 (3 yr average)			Healthy People 2010 Goal
	Live Births	Low Birth Weight		
		Number	Percent	Percent
Lake County	714	42	5.9	5.0
California	559,936	38,368	6.9	5.0

Source: County Health Status Profiles 2010. California Department of Public Health.

SUBSTANCE USE AND ABUSE

Adult Alcohol Use and Abuse

Alcohol abuse is a pattern of drinking which results in harm to one's health, interpersonal relationships and/or ability to work. Certain manifestations of alcohol abuse include failure to fulfill responsibilities at work, school or home; drinking in dangerous situations such as while driving; legal problems associated with alcohol use and continued drinking despite the problems it causes or worsens.[96]

Alcohol abuse is associated with a number of acute and chronic health effects. *Chronic* health consequences of excessive drinking[97] can include liver cirrhosis (damage to liver

[95] County Health Status Profiles 2010. California Department of Public Health. http://www.cdph.ca.gov/programs/ohir/Pages/CHSP.aspx (April 2010)
[96] Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV), published by the American Psychiatric Association, Washington D.C., 1994. Reported at http://www.cdc.gov/alcohol/faqs.
[97] For men, heavy drinking is typically defined as consuming an average of more than 2 drinks per day. For women, heavy drinking is typically defined as consuming an average of more than 1 drink per day. Note: There is no one definition of moderate drinking, but generally the term is used to describe low-risk or responsible drinking. http://www.cdc.gov/alcohol/faqs.

cells); pancreatitis (inflammation of the pancreas); various cancers, including liver, mouth, throat, larynx (the voice box), and esophagus; high blood pressure; and psychological disorders. *Acute* health consequences can include motor vehicle injuries, falls, domestic violence, rape, and child abuse.[98]

The State collects, monitors, and reports community-level indicators that serve as direct and indirect measures of the prevalence of alcohol and other drug use and related problems. Selected indicators for adults in Lake County are shown in Table 35. The county's rates for all eight of these indicators are higher than the statewide averages.

Table 35. Community-Level Alcohol and Drug-Related Indicators, Adults

Indicator (rates per 100,000)	Report Period (3-yr avg. unless single year specified)	Lake	CA
Rate of arrests for drug-related offenses, ages 10-69	2002-2004	1,306.6	983.4
Rate of alcohol-involved motor vehicle accident fatalities	2001-2003	12.5	3.9
Rate of alcohol and drug use hospitalizations	2002-2004	358.3	214.8
Rate (per 1,000) of admissions to alcohol and other drug treatment, ages 10-69	2002-2004	1,636.1	856.8
Rate of deaths due to alcohol and drug use	2001-2003	51.2	20.1

Source: *Indicators of Alcohol and Other Drug Risk and Consequences for California Counties*. Lake County 2007. Center for Applied Research Solutions.
Note: These data are expected to be updated in late 2010.

Lake County's 3-year average rate of alcohol-involved motor vehicle fatalities for 2001-2003 was three times higher than the state rate.[99] Having increased 8% between 2000 and 2004, the 3-year rate of admission for alcohol and drug treatment in Lake County for 2002 to 2004 was nearly double the statewide average (Table 35 above). Rates for adolescents, between 10 and 17 years, grew by over 70% between 2000 and 2004, were more than 5 times the state average in 2004, and accounted for 23.4% of the county's total admissions, compared to only 9% statewide. The proportion of Hispanics admitted to treatment more than tripled, from 8.4% in 2000 to 26.7% in 2004.[100]

[98] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. http://www.cdc.gov/alcohol/faqs.
[99] Ibid.
[100] *Indicators of Alcohol and Other Drug Risk and Consequences for California Counties*, Lake County, 2007. Center for Applied Research Solutions. http://www.ca-cpi.org/Publications/community_indicators_2007.htm (June 2010).

Three-quarters of treatment admissions in 2004 were for marijuana use, about 14% for alcohol, and 9% for methamphetamine use. Over 80% of people admitted had initiated substance use before the age of 21.[101]

Lake County's rate of hospitalizations due to alcohol and drug use increased by 27% between 2000 and 2004, and the 3-year average rate for 2002 to 2004 were 1.7 times higher than the statewide rate.[102]

There were 30% more alcohol and drug-related deaths in Lake County in 2003 (35) than in 2000 (27), and the 3-year average rate for 2001 to 2003 was 2.5 times higher than the statewide rate. Close to half of these deaths were due to alcoholic liver disease, and 14% to alcohol dependence syndrome. Lake County's rate of death due to cirrhosis of the liver was five times higher than the statewide rate in 2003. (Note that Hepatitis C could be a major cause of cirrhosis.) And the county's rate of drug-related deaths (18.1 per 100,000) in 2003 was 15 times higher than the Healthy People 2010 goal of 1.2.[103]

Lake County has a higher rate of arrests for alcohol and drug-related crime than the state as a whole. The rate of arrests for drug offenses increased 40% between 2000 and 2004. While the rate of alcohol arrests fell by a third, it was still more than double the state rate in 2004. Though Whites accounted for 80.5% of arrests for drug-related crime, the proportion among Latinos almost doubled between 2000 and 2004.[104]

While these data are helpful for identifying risk and problem areas, there are some limitations to note. For example, the rates for alcohol and drug use prevalence and related problems may underestimate actual occurrence due to under-reporting. Further, admission rates do not account for the utilization of services provided outside of the publicly-funded alcohol and drug treatment and recovery system. Additionally, hospital discharge rates only include discharges for diagnoses directly attributable to alcohol and drug use. And, the contribution of chronic Hepatitis C infection is unknown.

According to the 2007 California Health Interview Survey (CHIS), the rate of binge drinking is higher in Lake County than statewide (Table 36 on the next page). According to the National Institute on Alcohol Abuse and Alcoholism, binge drinking is defined as a pattern of alcohol consumption that brings the blood alcohol concentration level to 0.08% or above. This pattern of drinking usually corresponds to more than 4 drinks on a single occasion for men or more than 3 drinks on a single occasion for women, generally within about 2 hours.[105] (Note that the CHIS question about binge drinking changed in 2007, from asking about binge drinking the past 30 days to the past year.)

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[101] Ibid.
[102] Ibid.
[103] Ibid.
[104] Ibid.
[105] National Institute of Alcohol Abuse and Alcoholism. *NIAAA council approves definition of binge drinking*. *NIAAA Newsletter* 2004;3:3.

Table 36. Adult Binge Drinking Rates

	Engaged in Binge Drinking[1]		
	2003 (in past month)	2005 (in past month)	2007 (in past year)[2]
Lake County	19.5%	14.3%	33.9%
California	15.1%	17.6%	29.7%

Source: 2003, 2005, 2007 California Health Interview Surveys, UCLA Center for Health Policy Research
[1] In the CHIS data set, for males, binge drinking is considered five or more drinks on one occasion; for females it is four or more.
[2] In 2007, the question changed to ask about binge drinking in the past year.

Adolescent Alcohol and Drug Use and Abuse

Underage drinking and binge drinking are associated with increased risks of motor vehicle crashes, suicide, and sexually transmitted diseases.[106,107, 108] Underage alcohol use is more likely to kill young people than all illegal drugs combined. Youth who use alcohol are 1.5 times more likely to require ER care and 9.4 times more likely to drink and drive; they are also 2.5 times more likely to smoke.[109] An analysis of 2005 Youth Risk Behavior Survey data from four states found that liquor (e.g., bourbon, rum, scotch, vodka, or whiskey) was the most prevalent type of alcoholic beverage usually consumed by students in 9th-12th grade, followed by beer or malt liquor. Wine was the least popular drink by a wide margin. For the most part, the finding held true for both genders and across all racial groups.[110]

California Health Interview Survey results indicate that rates of binge drinking among California adolescents, ages 12-17, have declined since 2005 (Table 37 on the next page). The CHIS data do not distinguish type of alcoholic beverage. Because of small population sizes, caution must be used in interpreting Lake County results. In 2007, 22% of youth respondents reported binge drinking in the prior month, compared to 0% of teens who reported this in 2003. Data were not available for 2005. The national HP objective for adolescent binge drinking is no more than 3.2%.

[106] Zador PL, Krawchuk SA, Voas RB. Alcohol-related relative risk of driver fatalities and driver involvement in fatal crashes in relation to driver age and gender: An update using 1996 data. *J Stud Alcohol*. 2000;61:387–395.
[107] U.S. Department of Health and Human Services. Centers for Disease Control and Prevention: Youth Risk Behavior Surveillance – United States, 2005. *Morb Mortal Wkly Rep*. 2006;55:.
[108] Bailey SL, Pollock NK, Martin CS, et al.. Risky sexual behaviors among adolescents with alcohol use disorders. *J Adolesc Health*. 1999;25:179–181.
[109] National Household Survey on Drug Use and Health
[110] CDC. Youth Risk Behavior Surveillance—United States, 2005. *MMWR* 2006;55(No. SS-5).

Table 37. Underage Binge Drinking Rates, ages 12-17

	Engaged in Binge Drinking in past month[1]		
	2003	2005	2007
Lake County	0.0%	n/a	22.3%*
California	6.3%	7.0%	4.8%

Source: California Health Interview Surveys, 2003, 2005, 2007. UCLA Center for Health Policy Research
[1] Male binge drinking in CHIS is five or more drinks on one occasion in past month; female binge drinking is four or more drinks.
*Estimate is statistically unstable.

The community indicators the State collects, monitors, and reports for youth in Lake County are shown in Table 38. The county's rates for *all* of these indicators are higher than the statewide averages.

Table 38. Community-Level Alcohol and Drug-Related Indicators, Youth

Indicator (rates per 100,000)	Report Period (3-yr avg. unless single year specified)	Lake	CA
Rate of juvenile arrests for alcohol-related offenses, ages 10-17	2004	551.2	219.9
Rate of juvenile arrests for drug-related offenses, ages 10-17	2004	881.9	482.3
Rate of juvenile admissions (per 1,000) to alcohol and other drug treatment, ages 10-17	2004	2,290.5	462.8

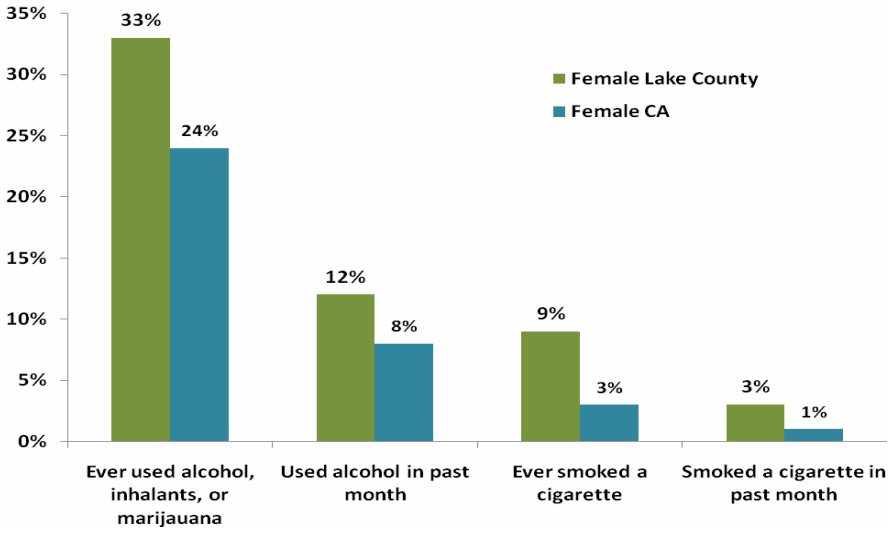
Source: *Indicators of Alcohol and Other Drug Risk and Consequences for California Counties*. Lake County 2007. Center for Applied Research Solutions.
Note: These data are expected to be updated in fall 2010.

The California Healthy Kids Survey (CHKS), which collects data on students in grades 5, 7, 9 and 11 a minimum of every two years, is often used to look at youth alcohol and drug use. CHKS results for secondary level students in Lake County are only available by school district, not aggregated for the county as a whole; no recent data on these grades has been posted. County-wide elementary level results are available for the most recent reporting year (2006-2008); however, this age group is asked more limited questions about alcohol and drug use than the older students.

Across the board, female 5th graders in Lake County reported more use of alcohol and drugs than both male 5th graders in the county and female 5th graders statewide

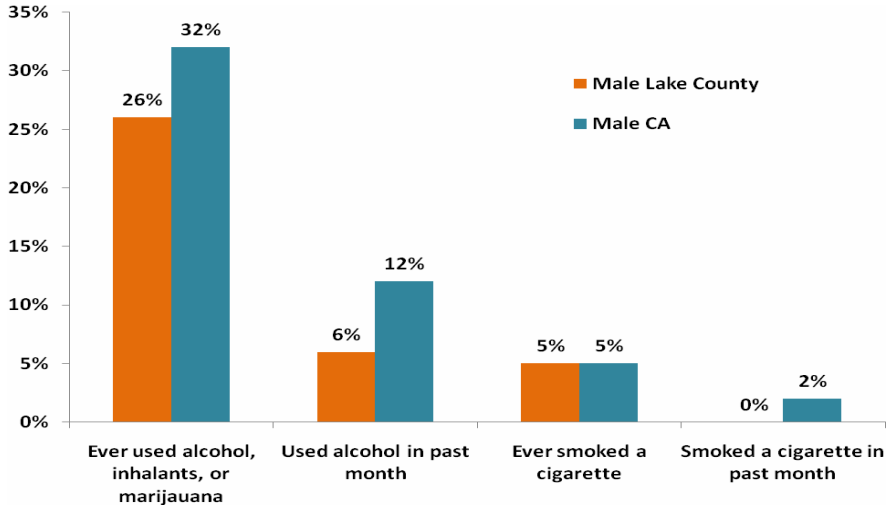
(Figures 12 and 13).[111] A third of the 5th grade females reported ever using alcohol, inhalants, or marijuana compared to about one-quarter of Lake County male 5th graders and about one-quarter of the female 5th graders statewide. Nine percent reported ever having smoked a cigarette compared to 5% of the males and 3% of females statewide. The county's male 5th graders reported less use than state averages for male 5th graders.

Figure 12. Female 5th Graders Use of Alcohol & Drugs, Lake County vs. California, 2007



Source: California Healthy Kids Survey, Fall 2008.

Figure 13. Male 5th Graders Use of Alcohol & Drugs, Lake County vs. California, 2007



Source: California Healthy Kids Survey, Fall 2008.

[111] California Healthy Kids Survey, Fall 2008. http://www.wested.org/cs/chks/query/q/1298?district=aggregate (July 2010)

The effect of alcohol advertising is important with regard to underage drinking and binge drinking. According to recent research, children as young as 11 and 12 years old who are exposed to alcohol marketing are more likely to use alcohol or plan to use it. Children with the highest levels of marketing exposure (e.g., at sporting events) were 50% more likely to drink and 36% more likely to intend to drink a year later compared to children with little exposure to alcohol ads.[112] Research has shown that delaying alcohol use decreases the likelihood that young people will drop out of school or participate in criminal activities.[113]

In 2004, adolescents between the ages of 10 and 17 accounted for 9% of all drug and alcohol-related arrests in Lake County. Their rate of arrests for alcohol offenses was 2.5 times the state rate, and the rate for drug offenses was almost double the state rate.[114]

Adult and Youth Tobacco Use

Despite the effectiveness of comprehensive tobacco control programs in reducing smoking consumption, inequities remain. For example, smoking rates of college-educated individuals are now below Healthy People 2010 goals, but populations with lower income or lower education, along with certain other groups, continue to smoke in higher number than the national average.[115]

Tobacco use is the single most preventable cause of death and disease in the United States. Smoking causes at least 80% of all deaths from lung cancer, about 80% of all deaths from bronchitis and emphysema and approximately 17% of all deaths from heart disease; 30% of all cancer deaths can be attributed to smoking. Across all states, the prevalence of cigarette smoking among adults ranges from 9.3% to 26.5%. California ranks 2nd best among the states. Among youth ages 12-17, the range across all states is 6.5% to 15.9%. California ranks 3rd best among the states on this indicator. [116]

According to the California Health Interview Survey (CHIS), in 2007, 14.5% of California adults reported being a smoker (Figure 14 on the next page). A much higher proportion, 25.9%, of Lake County adults smoked in that year. Among youth ages 12-17, 17.0%* of Lake County youth compared to 4.8% statewide reported being a current smoker.

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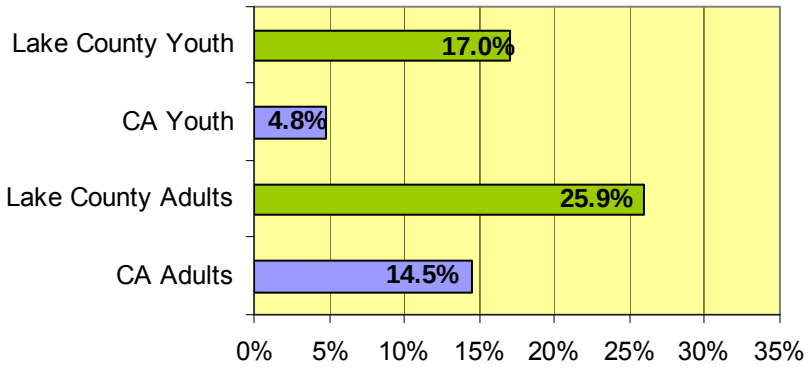
[112] Collins RL, Ellickson PL, McCaffrey D, Hambarsoomians K. Early Adolescent Exposure to Alcohol Advertising and its Relationship to Underage Drinking. *Journal of Adolescent Health*, April 2007;(40);6:527-534.
[113] Elliott DS. Health Enhancing and Health-Compromising Lifestyles. *Promoting the Health of Adolescents*. Oxford University Press, New York. http://www.oup-usa.org/toc/tc_0195091884.html.
[114] *Indicators of Alcohol and Other Drug Risk and Consequences for California Counties*, Lake County, 2007. Center for Applied Research Solutions. http://www.ca-cpi.org/Publications/community_indicators_2007.htm (June 2010)
[115] Centers for Disease Control and Prevention. Cigarette smoking among adults—United States, 2006. *MMWR Morb Mortal Wkly Rep*. 2007;56(44):1157-1161.
[116] http://www.cdc.gov/tobacco/data_statistics/state_data/state_highlights/2010.
* The small sample size and/or confidence interval (0-13.6%) make the rate statistically unreliable.

Figure 14. Percent of Population Reporting Being a Current Smoker, 2007



Source: California Health Interview Survey.

Neither the state nor county meet the Healthy People 2010 objective of no more than 12% of adults age 18+ who smoke cigarettes. Decreasing the rate of smoking would lead to a demonstrable decrease in mortality from cancer alone, not to mention the additional decreases in mortality in heart disease and stroke. Based on CDC estimates, a 1% decrease in smoking would lead to about a 1% decrease in all-cause mortality in Lake County.

Perinatal Substance Abuse

Although California is recognized as a national leader in developing alcohol and other drug services for women, many counties, including Lake County, do not have the benefit of an adequate spectrum of comprehensive gender-specific and culturally appropriate screening, treatment and support services to address the needs of pregnant women involved with substance abuse. Accurate statistics on substance use during pregnancy are difficult to obtain—for example, since alcohol is a legal drug, its negative impact is often overlooked—but several studies, including local efforts, offer a sufficient picture of use to guide planning and intervention strategies.

The California Maternal and Infant Health Assessment (MIHA), an annual, statewide-representative telephone survey (English and Spanish) of women who recently gave birth to a live infant, also tracks tobacco and alcohol use during pregnancy. The data are linked to birth certificate information and weighted to reflect sampling design. Regional (Lake is 1 of 23 Northern Mountain Counties) MIHA data for 2005-2006 showed 21.9% of pregnant women reported smoking during the 1st trimester and 12.6% during the 2nd trimester. And, approximately 20% reported drinking alcohol during the 1st trimester and 8.2% during the 3rd trimester. Higher rates of use were associated with lower income and education levels, but not markedly.[117]

[117] http://www.cdph.ca.gov/data/surveys/Documents/MO-TableB1-NM-SmokingAlcoholUse.xls. Accessed 8/4/10.

A 2008 report[118] by Ira Chasnoff, M.D. presents results of a study of outcomes of a comprehensive system of screening, assessment, and brief intervention in almost 79,000 pregnant women in 16 California counties from throughout the state. While the report does not attempt to present community-wide prevalence rates, it is based on a very large dataset and provides insights for perinatal substance use patterns statewide that have relevance for Lake County providers. In response to the *4P's Plus*© screening instrument[119] administered at the first prenatal visit, 12.8% of women in the study reported tobacco use in the month prior to knowledge of the pregnancy, 16.1% alcohol use, and 6.6% marijuana use.[120] Eliminating duplicate counts, the rate of positive screens, i.e. women *at risk* for substance use during pregnancy due to alcohol, tobacco, or marijuana use in the month prior to knowledge of pregnancy, was 23.7%. Excluding women who reported using tobacco only, the rate was 19.2% and dropped to 8.6% after women learned of their pregnancy. Of the women reporting the use of alcohol and illicit drugs, close to half (45%) continued to use after learning they were pregnant.

Applying conservative statewide estimates of prevalence from Vega and Chasnoff's earlier work, approximately 81 infants would be projected to have been born substance-exposed in Lake County in 2008, or about 11.4% of all births that year.[121]

Lake County is among the pilot counties utilizing the *4P's Plus*© screening and intervention methodology to deter drug use during pregnancy. The screening tool is being utilized by all of the county's main clinics: Sutter Lakeside Hospital's Family Health Clinic, Lakeside Health Center, Tribal Health Clinic and Clearlake Family Health Center. Data are available on 107 women who were screened and followed during their pregnancies in the period 4/15/09 - 06/03/10. Of these 107 women, close to three quarters (73%) reported using some type of substance (including cigarettes) *before* learning they were pregnant; *since* learning they were pregnant, 42.1% had used a substance, some more than one substance (Figure 15 on the next page).

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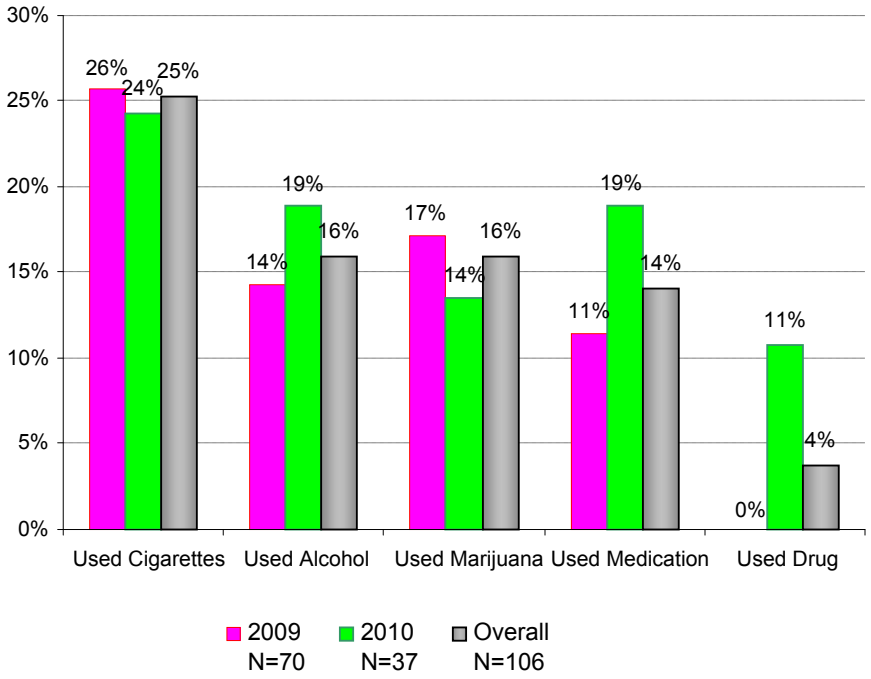
[118] Chasnoff, et al. Perinatal Substance Use Screening in California: Screening and Assessment with the *4P's Plus*© *Screen for Substance Use in Pregnancy. NTI Upstream, 2008.* http://www.cdph.ca.gov/programs/perinatalsubstanceuse/pages/default.aspx (July 2010)

[119] *4P's Plus*© screening and intervention methodology is a time-conserving, user-friendly methodology easily incorporated into prenatal care, and is designed to obtain accurate information with follow-up intervention on positive screens.

[120] Chasnoff, et al. Perinatal Substance Use Screening in California: Screening and Assessment with the *4P's Plus*© *Screen for Substance Use in Pregnancy. NTI Upstream, 2008.* http://www.cdph.ca.gov/programs/perinatalsubstanceuse/pages/default.aspx (July 2010)

[121] Vega W et al. *Profile of Alcohol and Drug Use During Pregnancy in California, Perinatal Exposure*. UC Berkeley and the Western Consortium for Public Health. Study conducted for the California Department of Alcohol and Drug Programs, September 1993.

Figure 15. Substance Use During Pregnancy, 4P's Plus©, Lake County, 4/15/09 - 06/03/10



ORAL HEALTH

Early Childhood

Oral health is an important component of overall health. Pregnancy and early childhood are particularly important times to access oral health services because the consequences of poor oral health can have a lifelong impact.[122] Improving the oral health of pregnant women prevents complications of dental diseases during pregnancy (e.g., abscessed teeth), and has the potential to subsequently decrease Early Childhood Caries in their children. Yet many women do not seek—and are not advised to seek—dental care as part of their prenatal care, although pregnancy provides a "teachable moment" as well as being the only time some woman are eligible for dental benefits.[123]

Dental disease affects more school-age children than any other chronic health condition—next to the common cold, tooth decay is the most prevalent human disorder. Dental disease among children in California is an epidemic, five times more common in

[122] U.S. Department of Health and Human Services. *Oral health in America: a report of the Surgeon General*. NIH Publication No. 00-4713, Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, National Institute of Dental and Craniofacial Research, May 2000.
[123] Oral Health During Pregnancy and Early Childhood: Evidence-Based Guidelines for Health Professionals. Aved BM, Weintraub JA, Stein E. *J CA Dent Assn*. June 2010.

children than asthma.[124] And it is an epidemic that is almost entirely (and inexpensively) preventable. In California, students miss an estimated 874,000 school days annually due to dental problems. These absences cost local school districts approximately $28.8 million.[125] Moreover, children from poor families suffer twice as much dental disease as middle-class children and their disease is more likely to remain untreated.

According to the 2006 statewide Dental Health Foundation needs assessment, about one-third of low income children have untreated decay compared to about one-fifth of higher income children. Nearly 40% of children with no insurance have untreated decay compared with 21% of children with private insurance.[126] In Lake County, 41% of preschool children receiving a dental screening in 2008 experienced dental decay.[127]

While it is difficult to accurately determine the number of these children that are receiving care, according to the 2007 California Health Interview Survey (CHIS), close to 9 in 10 (86.2%) children in Lake County were enrolled in some type of insurance program with dental coverage. And, more than 8 in 10 reported visiting a dentist in the last year (Table 39). These findings are more favorable than the statewide averages for these indicators. The proportion that used the oral health care system in the last year exceeds the national health target of 56%.

Table 39. Dental Health Indicators

Dental Health	Lake County	Statewide
Children with dental insurance	86.2%	80.4%
Children who visited a dentist in the last year	83.7%	80.4%

Source: California Health Interview Survey, 2007

The CHIS data represent Lake County children at all income levels. *Medi-Cal* data, which represent low-income children, tell a different story for children's dental visits according to the Medi-Cal Dental Services Division. In 2008, 10.3% of Lake County children ages 0-20 with Medi-Cal dental benefits were reported to have used a dental service—one-quarter the statewide average of 41.3%—ranking the county 50th lowest among California's 58 counties. For Lake County children age 0-3 and 4-5, the utilization rate was even lower, 3.3% and 12.3%, respectively.[128]

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[124] U.S. Department of Health and Human Services (HHS). *Oral Health in America: A Report of the Surgeon General*. Rockville, MD: HHS, National Institutes of Health, National Institute of Dental and Craniofacial Research, 2000.
[125] Oral health: Integral to well-being. Expanding children's access to & use of oral health services. Children Now. Available at http://www.childrennow.org/index.php/learn/oral_health/.
[126] *Mommy it Hurts to Chew. The California Smile Survey An Oral Health Assessment of California's Kindergarten and 3rd Grade Children.* Dental Health Foundation, February 2006.
[127] Fuller M, Reynolds J. All Lake County kids need dental care. *Lake County News*. February 10. 2008.
[128] California Department of Health Care Services, Medi-Cal Dental Services Division. April 2010. Special report prepared for the author.

There are multiple reasons for low utilization of dental services by low-income children, even for those with some form of dental insurance. These range from lack of capacity and provider unwillingness to accept publicly-funded program coverage on the health system or supply side to financial concerns, lack of understanding the value of preventive care, and fear of the dentist on the user side.

Results from the Lake County Children's Oral Health Project 2002-2009 have shown a positive impact on the number and severity of dental conditions among children, including a reduction in the percentage of children with baby bottle tooth decay. According to program data, on average, the percentage of elementary school children who were caries free increased from 14% to 21% between 2002-04 and 2008-09 across the 4 participating schools. For preschools, the percentage of children screened who were caries free increased from 36% to 47% over the 7-year period (Table 40). Further outcomes included 63% of parents reporting a dental home for their child (with 71% saying their child had seen a dentist within the last year), and 69% reporting their child brushed her/his teeth at least twice a day.[129]

Table 40. Dental Screening Results by Preschool and Elementary School, Lake County

School	2002-03	2008-09
Children who were caries free		
Minnie Canyon Elementary	8%	20%
Upper Lake Elementary	9%	23%
Pomo Elementary	12%	21%
Lower Lake Elementary	21%	20%
Overall Elementary Average	14%	21%
Lower Lake Preschool	25%	57%
Middletown Preschool	29%	42%
Pomo Preschool	39%	53%
Kelseyville Preschool	46%	34%[1]
Overall Preschool Average	36%	47%

Source: Lake County Children's Oral Health Project 2002-2009
[1]2007-08 only.

Older Adults

Oral health is often an overlooked component of seniors' general health and well-being and can affect general health and quality of life in very direct ways, such as pain and suffering and difficulty in speaking, chewing and swallowing. The loss of self-esteem, which can intensify isolation and possibly lead to depression, is associated with the loss of teeth.[130]

[129] Lake County Children's Oral Health Project 2002-2009. C.A. Ferron & Associates. July 29, 2010.
[130] Davis DM et al. The emotional effects of tooth loss: a preliminary quantitative study. *British Dental Journal,* 188(9):503-506, May 2000.

One of the most important predictors of dental care utilization is having dental insurance. According to the 2007 California Health Interview Survey, 58.0% of Lake County residents age 65+, compared to 47.2% statewide, reported having no dental insurance in the last year. In 2003 (more recent data are not available) 16.2% of seniors reported to CHIS not being able to afford needed dental care, compared to 10.9% statewide who reported this hardship. (Note: the small sample size for Lake County makes the figure statistically unstable.) Applying the national estimate to Lake County that 78% of adults age 65+ must pay dental care expenses out of pocket, approximately 10,491 of the county's seniors would be projected to have to cover the cost of their dental visits and treatment without the benefit of insurance coverage.

MENTAL HEALTH

Mental disorders are very important health problems and are just as disabling as serious chronic diseases like heart diseases and cancer in terms of premature death and lost productivity. There is ample research that indicates the majority of money spent on medical care goes to treating patients with interrelated health problems, that is, both physical and mental health problems. A key component of community health is "recognizing the relationship between mental and physical health and ensuring that services account for that relationship."[131]

Mental health problems are among the most important contributors to the burden of disease and disability nationwide. The effect of mental health disorders on health and productivity has long been underestimated. Devastating disorders such as schizophrenia, depression and bipolar disorder, Alzheimer's disease, the mental and behavioral disorders suffered by children, and a range of other mental disorders affect nearly one in five Americans in any year.[132] A similar proportion of California adults, 20%, said in the 2005 California Health Interview Survey (CHIS) they needed help for a mental or emotional health problem.[133] Projecting this estimate of need to Lake County's population, up to 12,800 persons in the county could suffer from some level of mental health problem or disorder. The county's disproportionate number of veterans could increase this number.

Even more than other areas of health and medicine, the mental health field is plagued by disparities in the availability of and access to its services. While depression is under-detected at all ages, much more funding is available for treating younger people, for example. A key disparity often hinges on a person's financial status; formidable financial barriers block needed mental health care regardless of whether one has health insurance with inadequate mental health benefits or lack of any insurance.

Approximately 20% of older adults, who face challenges coping constructively with the physical limitations, cognitive changes, and various losses, such as bereavement, that

[131] *Good Health Counts: A 21st Century Approach to Health and Community for California.* Prevention Institute. November 2007.
[132] *Mental Health: A Report of the Surgeon General. December 1999.* www.surgeongeneral.gov.
[133] Grant D, et al. Mental Health Status and Use of Mental Health Services by California Adults. *Health Policy Research Brief*. UCLA Health Policy Research. July 2010.

frequently are associated with late life, are estimated to experience specific mental disorders that are not part of "normal" aging. Many in the senior population have to contend with difficulties remaining in their homes due to health and financial reasons, a dearth of community-based affordable assisted living facilities, and difficulties accessing and retaining home health services. Although Lake County has a variety of senior service providers and professionals, the network is thin and not all are available in every geographic area. Moreover, seniors frequently find that those services are hard to access, have different and sometimes confusing criteria for qualifying, have various cost structures, and are located in a variety of agencies and organizations. Family caregivers find it increasingly difficult to be aware of the range of services as well as to navigate the various programs needed to provide for the physical, mental health, and social needs of elderly loved ones.

To understand how mental health concerns impact Lake County, several indicators were reviewed: psychological distress, teen depression, use of treatment resources, and suicide. Lake County faces a number of challenges in the incidence of mental health concerns. Overall, the residents of Lake County were more likely to experience psychological distress and symptoms of depression, more likely to have used prescription medication to treat a mental health issue, and commit suicide 3 times higher the state average. Lake County residents sought mental health treatment at approximately the same rate as residents of California, however.

Psychological Distress

According to the 2007 California Health Interview Survey (CHIS), 11.3% of Lake County residents are likely to have experienced psychological distress in the past year.[134] This compares to 8.5% of California residents. The rate in Lake County was higher for females (13.6%) than males (8.8%).[135]

Slightly over 70% of Lake County seniors who responded to the 2005 CHIS (the most recent year data are available) reported they had not experienced any days of poor mental health in the last month, a slightly more favorable proportion than seniors statewide. The percentage reporting poor mental health 1-6 days during the past month was the same in Lake County and the state as a whole.[136]

Teen Depression

The 2005 CHIS (the most recent year data are available) estimated that 22% of teens in Lake County were at risk for depression, approximately equal to the rate statewide (21%).[137]

[134] The scale consists of 10 questions about non-specific psychological distress and seeks to measure the level of current anxiety and depressive symptoms a person may have experienced in the month or year prior to interview.
[135] 2007 California Health Interview Survey. http://www.chis.ucla.edu. accessed 7/14/10.
[136] 2005 California Health Interview Survey. http://www.chis.ucla.edu. accessed 7/14/10.
[137] Ibid.

2007 data from the California Healthy Kids Survey showed that the rate of depression was distributed unequally across race/ethnicities (Table 41 on the next page). Youth who identified as Native American, multi-ethnic and other were more likely to report symptoms of depression than others. These groups were also 5% or more above the state average for teens reporting the same race/ethnicity (Table 41).[138]

Table 41. Percentage of Youth reporting Depression Symptoms by Race/Ethnicity

Race/Ethnicity	California	Lake County	Difference
African American/Black	31.9%	34.2%	2.3%
Asian	29.6%	26.9%	-2.7%
Caucasian/White	29.1%	31.9%	2.8%
Hispanic/Latino	33.3%	30.8%	-2.5%
Native American	36.1%	41.5%	5.4%
Pacific Islander	36.8%	n/a	n/a
Multiethnic	34.9%	41.8%	6.9%
Other	33.9%	39.0%	5.1%

Source: 2007 California Healthy Kids Survey.

When these same data were viewed by gender and grade level, 9th grade females and males in non-traditional schools showed higher rates of depression symptoms than the state average for youth of the same age and gender (Table 42).[139]

Table 42. Percentage of Youth Reporting Depression Symptoms by Grade Level and Gender

Grade Level	Female		Male	
	California	Lake County	California	Lake County
7th Grade	32%	35.1%	25%	16.6%
9th Grade	38%	47.3%	25%	23.4%
11th Grade	39%	43.4%	26%	22.4%
Non-Traditional	49%	n/a	31%	44.4%

Source: 2007 California Healthy Kids Survey.

[138] As cited on kidsdata.org, California Department of Education, California Healthy Kids Survey (WestEd). http://www.wested.org/chks, accessed 7/14/10. Teens reported "feeling so sad or hopeless every day for 2 weeks or more that they stopped doing some usual activities."

[139] Ibid.

Use of Treatment Resources

Eight percent of Lake County residents reported seeing a health professional for emotional/mental problems[140] and 15.3% indicated they had taken prescription medication for emotional/mental health issue in the past year (Table 43).[141] The rate of medication use is higher than the state average of 10%, and particularly higher for females in Lake County (18.9% vs. 13% for California).

Table 43. Use of Treatment Resources, California and Lake County residents

Treatment Resource	California			Lake County		
	Male	Female	Total	Male	Female	Total
Saw health professional for emotional/ mental problems	6.5%	10.1%	8.3%	4.5%	11.4%	8.1%
Has taken prescription medicine for emotional/mental health issue in past year	6.9%	13.0%	10.0%	11.5%	18.9%	15.3%

Source: 2007 California Health Interview Survey

Suicide

Suicide exacts an enormous toll on its victims and the family and friends left behind. Suicide rates, which vary by age, gender and race/ethnicity, may underestimate the true rate of intentional self-harm. For example, the stigma attached to suicide may influence classification, and certain fatal events may arise from thoughts and actions similar to suicide (e.g., single-vehicle motor vehicle crashes, gang-related fights with weapons).

For the three-year average 2006-2008, the rate of suicides in Lake County was 27.6 per 100,000 residents, or 18 suicides. This is over 5 times the national benchmark of 4.8 per 100,000 residents, and well above the California average of 9.0. The county ranked 57th worse among the 58 counties on deaths from suicide. [142]

The elderly are the highest-risk population for suicide according to the Centers for Disease Control and Prevention, but few suicide prevention programs target them—a result, advocates say, of scarce funding and lack of concern for older adults. Although they comprised only 12% of the U.S. population 2004, people age 65 and older accounted for 16% of all suicide deaths that year.[143] As the baby boomer population ages, the number of suicides among the elderly may be expected to climb. The

[140] 2005 California Health Interview Survey, http://www.chis.ucla.edu/main/DQ3/geographic.asp, accessed 7/14/10.
[141] 2007 California Health Interview Survey, http://www.chis.ucla.edu/main/DQ3/geographic.asp, accessed 7/14/10.
[142] County Data Profiles, 2010. California Department of Public Health, Center for Health Statistics. 2006-2008 Birth and Death Statistical Master Files, http://www.cdph.ca.gov/programs/ohir/Pages/CHSP.aspx, accessed 7/14/10.
[143] Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. (WISQARS) [www.cdc.gov/ncipc/wisqars.

California Department of Public Health, EPIC Branch identified that between 2000 and 2007 there were 25 suicide deaths reported among seniors ages 65+ in Lake County.[144]

SAFETY ISSUES

Falls Among Seniors

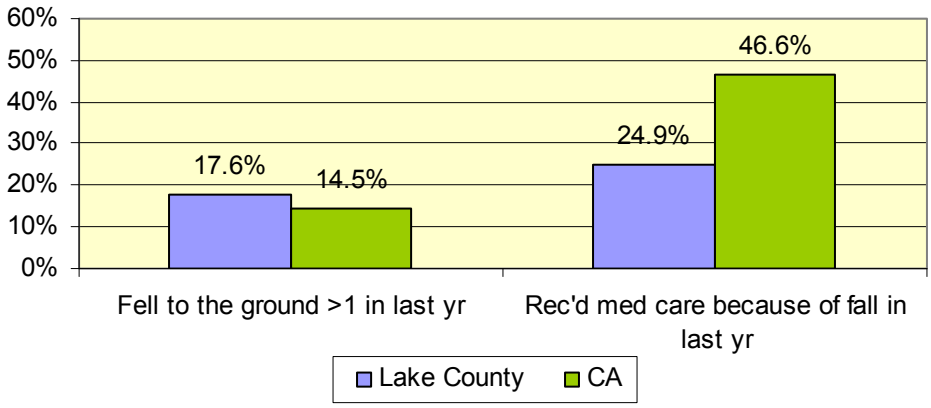
Among people 65 years and older, falls are the leading cause of injury deaths and the most common cause of nonfatal injuries and hospital admissions for trauma. Serious injuries from falls include hip and other fractures, and head, neck and back injuries that require significant care. Falls that result in hospitalization also are likely to cause placement in costly and restrictive long-term care facilities, significantly reduced post-fall activity, depression, anxiety and isolation. Full recovery is unlikely for a significant percentage of survivors.[145]

Hospital discharge information has traditionally been the best falls surveillance system in California (although the data are limited to only those falls that are serious enough to warrant a hospital admission). In 2006, there were 199 nonfatal hospitalized fall injuries among older (age 60+) Lake County residents; almost two-thirds of these falls were by women.[146]

In 2007, the California Health Interview Survey (CHIS) began asking seniors, 65+, about falls. In Lake County, 18% reported falling to the ground more than once in the past year, somewhat higher than the state average of 15% (Figure 16).[147] Of those who had fallen in the past year, a quarter had received medical care, compared to almost half statewide.

[144] California Department of Public Health, Vital Statistics Death Statistical Master File. EPIC Branch. http://www.applications.dhs.ca.gov/epicdata/default.htm. Accessed July 6, 2010.
[145] Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. (2006). www.cdc.gov/ncipc/wisqars.
[146] California Department of Public Health, Safe and Active Communities Branch, EPICenter. http://www.apps.cdph.ca.gov/epicdata/default.htm (July 2010)
[147] California Health Interview Survey, 2007. UCLA Center for Health Policy Research

Figure 16. Falls by Seniors, Lake County and California



Source: California Health Interview Survey, 2007.
[1] Asked of those who had fallen in the past 12 months.

Intimate Partner Violence

It is difficult to gauge the extent of domestic or intimate partner violence in a community, because it occurs most often behind closed doors, and it is estimated that a large number of occurrences go unreported. The primary indicator used for domestic violence is the number of law enforcement calls for assistance. Another is the percentage of calls that involve weapons.

In 2008 in Lake County, there were 458 calls for domestic violence assistance, 4% of which involved a firearm, knife, or other dangerous weapon (Table 44).[148] This is down from 564 calls in 2005, of which 7% involved a weapon.[149] The City of Clearlake accounts for about 1 in 3 calls for assistance.

Table 44. Total Number of Total Domestic Violence Calls, Percent Calls Involving Weapons, Clearlake's Percent of Total Calls

Category	2005	2006	2007	2008
Total calls	564	575	522	458
% of calls involving weapons[1]	7%	5%	4%	4%
Clearlake, % of total	27%	32%	39%	33%

Source: California Department of Justice, Criminal Justice Statistics Center, Criminal Justice Profiles
[1] Firearm, knife or cutting instrument, or other dangerous weapon. Does not include personal weapons, defined as hands, feet, etc.

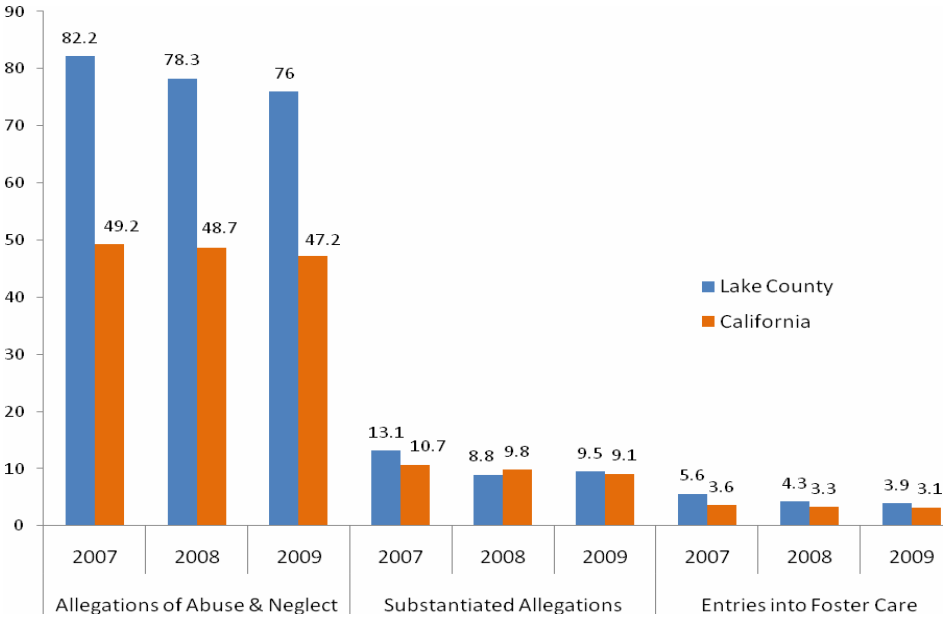
[148] California Department of Justice, Criminal Justice Statistics Center, Criminal Justice Profiles. http://ag.ca.gov/cjsc/pubs.php#profiles (July 2010)
[149] Ibid.

Child Abuse

Child abuse is a serious problem with numerous long-term consequences. Children who experience maltreatment are at increased risk for adverse health effects and behaviors as adults—including smoking, alcoholism, drug abuse, eating disorders, severe obesity, depression, suicide, sexual promiscuity, and certain chronic diseases.[150]

Lake County's rate of child abuse allegations is substantially higher than the rate for the entire state (Figure17a). Rates for substantiations and entries into foster care are closer, though still somewhat higher, than state rates. The actual number of allegations and substantiated child abuse cases for the county are shown in Figure 17b. Over the last 3 years, the rate at which the Child Abuse Hotline in Lake County has received child abuse allegations, as well as rates of substantiation and entry into foster care, has declined.[151]

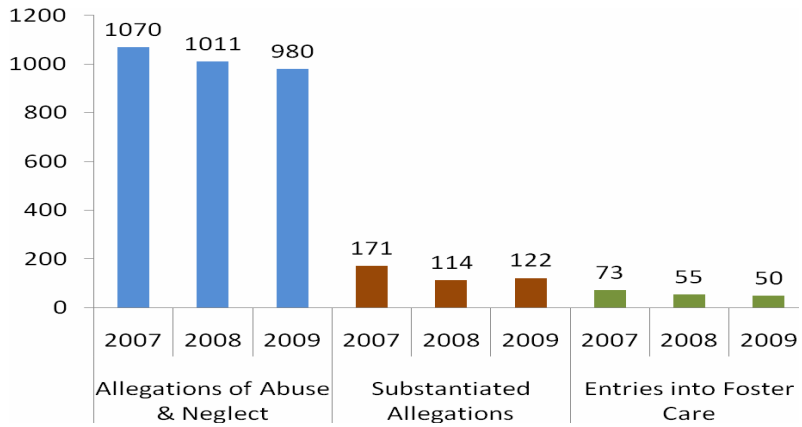
Figure 17a. Rates of Child Abuse Allegation & Substantiation, Lake County and California, 2007-2009



Source: Child Abuse Allegation & Substantiation Rates, Child Welfare Dynamic Report System

[150] Felitti V, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. *American Journal of Preventive Medicine* 1998;14(4):245–58.
[151] Child Abuse Allegation & Substantiation Rates, Child Welfare Dynamic Report System. http://cssr.berkeley.edu/ucb_childwelfare/RefRates.aspx (July 2010)

Figure 17b. Number of Child Abuse Allegation & Substantiation, Lake County, 2007-2009



Source: Child Abuse Allegation & Substantiation Rates, Child Welfare Dynamic Report System

Elder Abuse

Elder abuse is a serious problem that is said to live in the shadows of most communities and go largely unreported. California Department of Social Services Adult Protective Services (APS) data show that the number of active cases statewide has been steadily increasing in recent years. A 2008-09 needs assessment conducted by the Area Agency on Aging of Lake and Mendocino Counties confirms that this is true in Lake County.[152]

At the time of the assessment, details of elder abuse cases handled by APS were only available for Mendocino County; however, the report states that the data can be extrapolated to include the entire planning and service area, including Lake County. During 2006 to 2008, more than 50% of APS cases opened in Mendocino County for abuse and neglect of dependent and older adults were for seniors 65 and older, and had risen by 16% from 229 to 266.[153]

Of all APS investigations in 2006-2008, 43% were for abuse perpetrated by others, and 57% for self-neglect.[154] Abuse perpetuated by others was evenly divided between reports of financial abuse, psychological/mental abuse, and neglect and physical abuse. The majority of self-neglect cases were for health and safety and medical/physical care issues.

[152] 2008-2009 Area Plan Needs Assessment. Area Agency on Aging of Lake and Mendocino Counties.
[153] Ibid.
[154] Ibid.

The Ombudsman Program of Lake and Mendocino Counties, which receives and investigates complaints of abuse of long-term care residents in skilled nursing and residential care facilities, reported that complaint-related visits by the program increased 80% in 2006-2008 (Table 45).[155]

Table 45. Lake County Elder Abuse Indicators

	Referrals to Lake County APS	Complaint-related visits to residents of long-term care by Ombudsman Program
2006	391	31
2007	452	61
2008	419	68

Source: 2008-2009 Area Plan Needs Assessment. Area Agency on Aging of Lake and Mendocino Counties.

Exposure from the Physical Environment: Air Quality

In the last several years, a growing body of scientific evidence has indicated that the air within homes and other buildings can be more seriously polluted than the outdoor air in even the largest and most industrialized cities. Other research indicates that people spend approximately 90 percent of their time indoors.[156] Thus, for many people, particularly children, the risks to health may be greater due to exposure to air pollution indoors than outdoors.

The air quality in many places in California has improved. But despite progress, many people still suffer pollution levels that are often dangerous to breathe, and unhealthy air remains a threat to health. Air pollution is especially harmful to children as their lungs and alveoli (air sacs) aren't fully grown until children become adults.[157] Poorer people and some racial and ethnic groups are among those who often face higher exposure to pollutants and who may experience greater responses to such pollution.[158]

The American Lung Association's *State of the Air 2010* report looked at levels of ozone and particle pollution found in monitoring sites across the U.S. in 2006-2008, and identified the estimated number of at-risk groups in the population.[159] Grades for Lake County, which was rated 10th cleanest air quality county in the nation, are shown in Table 46 on the next page. Eight other counties (Humboldt, Marin, Mendocino, San

[155] Ibid.
[156] http://www.epa.gov/iaq/pubs/insidest.html#Intro1.
[157] World Health Organization. The Effects of Air Pollution on Children's Health and Development: a review of the evidence E86575.2005. Accessed at http://www.euro.who.int/document/E86575.pdf .
[158] O'Neill MS, Jerrett M, Kawachi I, et al.Health, Wealth, and Air Pollution: Advancing Theory and Methods. *Environ Health Perspect*.2003; 111: 1861-1870. Ostro B, Broadwin R, Green S, Feng W, Lipsett M.Fine Particulate Air Pollution and Mortality in Nine California Counties: Results from CALFINE. *Environ Health Perspect*. 2005; 114: 29-33. Zeka A, Zanobetti A, Schwartz J. Short term effects of particulate matter on cause specific mortality: effects of lags and modification by city characteristics. *Occup Environ Med.* 2006; 62: 718-725.
[159] State of the Air 2010. American Lung Association. Accessed at http://www.stateoftheair.rorg.

Francisco, San Mateo, Santa Cruz, Siskiyou, Sonoma) where there was complete monitoring also got an A for high ozone days; 5 other counties (primarily central coast) received an A for particle pollution.

Table 46. Lake County Air Quality Status

HIGH OZONE DAYS	
Ozone Grade	A
Orange Ozone Days [1]	0
Red Ozone Days	0
Purple Ozone Days	0
PARTICLE POLLUTION - 24 Hour	
Ozone Grade	B
Orange Ozone Days	1
Red Ozone Days	1
Purple Ozone Days	0
PARTICLE POLLUTION - Annual	
Ozone Grade	Pass[2]
GROUPS AT RISK	
Total Population	64,866
Pediatric Asthma	1,316
Adult Asthma	4,325
Chronic Bronchitis	2,278
Emphysema	968
Cardiovascular Disease	19,868
Diabetes	4,976
Children Under 18	13,981
Adults 65 and Over	10,479
Poverty Estimate	11,462

Source: American Lung Association. Data from 2006-2008.
[1] Air quality index levels: orange=unhealthy for sensitive groups; red=unhealthy for all; purple=very unhealthy for all.
[2] Since no comparable Air Quality Index exists for year-round particle pollution, grading was based on the Environmental Protection Agency's determination of violations of the national ambient air quality standard. Counties that EPA listed as being in attainment of the standard were given grades of "Pass;" nonattainment counties were given grades of "Fail."

Description of County Grading System

Grade	Weighted Average	Approx. # of Allowable Orange/Red/Purple/ Maroon days
A	0.0	None
B	0.3 to 0.9	1 to 2 orange days with no red
C	1.0 to 2.0	3 to 6 days over the standard: 3 to 5 orange with no more than 1 red OR 6 orange with no red
D	2.1 to 3.2	7 to 9 days over the standard: 7 total (including up to 2 red) to 9 orange with no red
F	3.3 or higher	9 days or more over the standard: 10 orange days or 9 total including at least 1 or more red, purple or maroon

Source: American Lung Association

PREVENTIVE/PROTECTIVE HEALTH

Vaccination

Immunization is a measure of access to preventive care. Vaccines can prevent the debilitating and in some cases fatal effects of infectious diseases. According to Healthy People 2010, vaccination coverage levels of 90% are sufficient to prevent the circulation of viruses and bacteria causing preventable disease.

In the fall, every licensed childcare facility in California must provide information on their total enrollment, the number of children who have or have not received the immunizations required, and the number of exemptions. In the spring, local and state public health personnel visit a sample of licensed childcare facilities, to collect the same information for comparison. The age group assessed by these surveys is 2 years through 4 years 11 months. On average, one-third of children in this age group attend licensed childcare centers. Hence, the data for children enrolled in licensed childcare centers may not be representative of the entire population of Lake County children in this age group. Data from the 2007-08 school year indicate that 86.6% of the children enrolled in reporting Lake County childcare centers received all required immunizations mandated by law (Table 47), a lower proportion than the statewide average.

Table 47. Immunization Coverage Among Children Ages 2 Through 4 Years in Licensed Childcare

Element	Lake	California
Admission status		
Entrants with all required immunizations	86.6%	93.5%
Conditional entrants	8.2%	4.9%
Entrants with permanent medical exemptions	0.00%	0.17%
Entrants with personal belief exemptions	5.18%	1.44%

Source: California Department of Public Health, Center for Infectious Disease Division, Department of Communicable Diseases, Immunization Division, Childhood Immunization Coverage 2006-2008.

The annual kindergarten assessment is conducted each fall to monitor compliance with the California School Immunization Law. Results from this assessment are used to measure immunization coverage among students entering kindergarten. In 2007-08, Lake County reported 85.8% of kindergarten entrants had all of their required immunizations at kindergarten entrance, a lower percentage than the statewide average (Table 48 on the next page).

Table 48. Immunization Coverage Among Children Ages 4-6 Years in Kindergarten, 2007-08

Element	Lake	California
Admission status		
Entrants with all required immunizations	85.8%	92.1%
Conditional entrants	10.7%	6.1%
Entrants with permanent medical exemptions	0.00%	0.18%
Entrants with personal belief exemptions	3.51%	1.56%

Source: California Department of Public Health, Center for Infectious Disease Division, Department of Communicable Diseases, Immunization Division, Childhood Immunization Coverage 2006-2008.

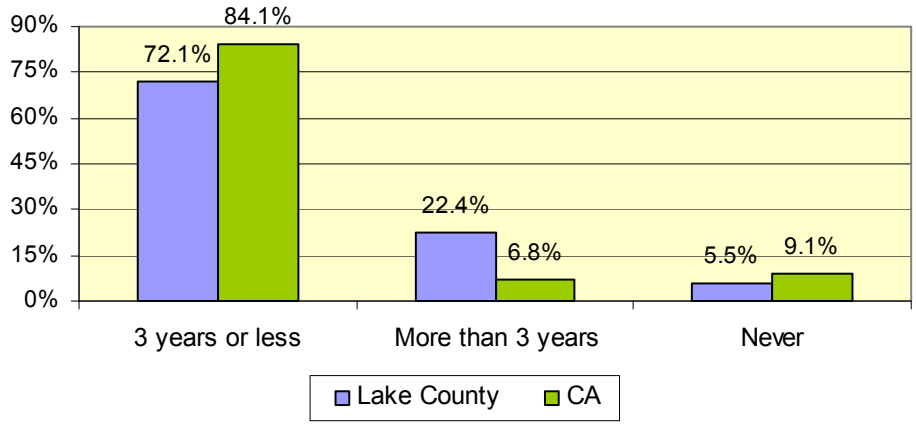
Health Screening for Cancer

Cancer is the second leading cause of death in the nation, and is also one of the most common chronic diseases. Critical health indicators commonly monitored for community health include cancer screening for cervical, breast, prostate and colorectal cancers. While it has always been difficult to get some people to go for cancer screening, it can be particularly challenging when financial barriers limit access or cultural beliefs influence utilization. In general, Lake County rates of cancer screening are less favorable than both state rates and national health objectives.

Cervical Cancer Screening

The Healthy People 2010 Objective is that at least 90% of women age 18 and older will have received a Pap test for cervical cancer during the past 3 years. The 2007 California Health Interview Survey (CHIS) asked about Pap test history. About 72% of women in Lake County reported having a Pap test within the last 3 years, 22.4% reported it had been more than 3 years since their last test, and 5.5% reported never* having had a Pap test. The county's rates compare unfavorably with statewide averages (Figure 18), and do not meet the national health objective of 90% within the past 3 years and 97% ever having a Pap test.

Figure 18. Pap Test History



Source: California Health Interview Survey, 2007

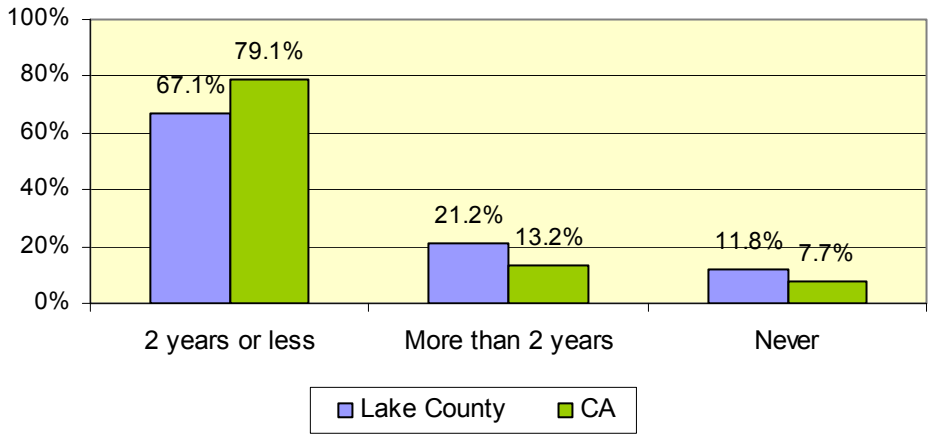
* The figure for the "Never" category is statistically unreliable due to small sample size.

Because cervical cancer is a preventable disease, incidence of this cancer can be reduced through public health interventions, such as education on cervical cancer risk factors, especially HPV infection. Mortality could be reduced and virtually eliminated through regular screening and early detection of the disease through a Pap smear.

Breast Cancer Screening

Earlier detection for breast cancer through regular screenings can greatly increase survival rates of breast cancer because it identifies cancer when it is most treatable.[160] At this time, mammography along with physical breast examination by a clinician is still the modality of choice for screening for early breast cancer. Lake County data from the 2007 CHIS show that 67.1% of women age 40-85 had a mammogram in the past 2 years compared to 79.1% statewide (Figure 19). The county's rate did not meet the national health objective (Healthy People 2010) of 70% screened in the past 2 years.

Figure 19. Mammogram Screening History



Source: California Health Interview Survey, 2007

Colorectal Cancer Screening

Colorectal cancer is the third most commonly diagnosed cancer and the third leading cause of cancer death in both men and women in the US. [161] Screening has been shown to have great effect on both cancer prevention and cancer survival rates,[162] but the challenge lies in making the test (colonoscopy/sigmoidoscopy) accessible to all

[160] "Effects of chemotherapy and hormonal therapy for early breast cancer on recurrence and 15-year survival: an overview of the randomised trials," early breast cancer trials' collaborative group (EBCTCG), *The Lancet*, Vol 365, May 14, 2005, pp1687-1717

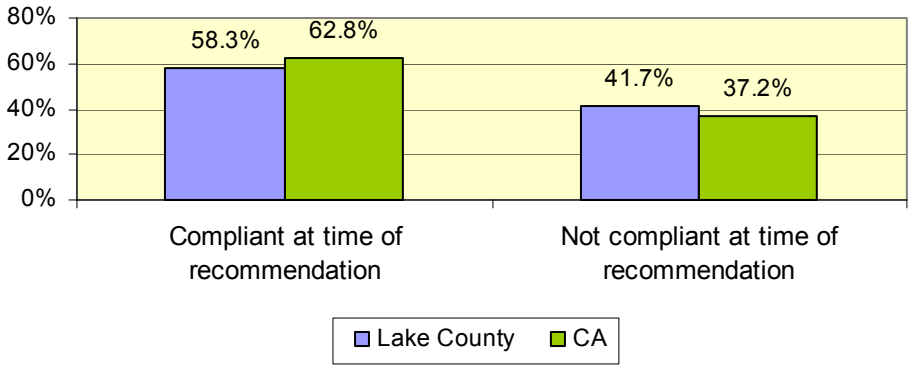
[161] *Colorectal Cancer Facts & Figures 2008-1010*. American Cancer Society. http://www.cancer.org/acs. Accessed July 2, 2010.

[162] Read TE, Kodner IJ. Colorectal cancer: risk factors and recommendations for early detection. *Amer Fam Physician* June 1999;59(11):3083-88.

adults at the appropriate age and schedule, and also in assuring that people actually follow through on recommendations to be screened. Survival from colon and rectal cancer is nearly 90% when the cancer is diagnosed before it has extended beyond the intestinal wall.

Respondents to the 2007 California Health Interview Survey (CHIS) were asked a series of questions on their cancer screening behaviors. When Lake County adults age 50 and older were asked about their compliance with a recommended screening (based on American Cancer Society recommendations and the U.S. Preventive Services Task Force guidelines for this age population), 58.3% said they were compliant *at the time of the recommendation,* a lower percentage than 62.8% statewide (Figure 20).

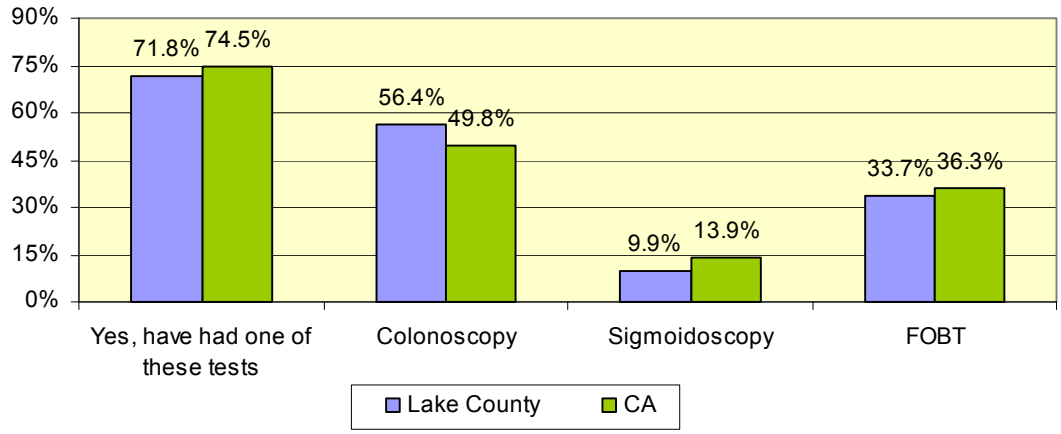
Figure 20. Colorectal Cancer Screening Compliance



Source: California Health Interview Survey, 2007

Close to 72% of Lake County adults age 50+ who responded to the 2007 CHIS reported they had had one of the types of tests (sigmoidoscopy, colonoscopy or FOBT) for this cancer (74.5% of Californians reported doing so). Of those respondents, a greater proportion countywide than statewide had had a colonoscopy; the reverse was the case for sigmoidoscopy (Figure 21 on the next page). The national health target (Healthy People 2010) is to increase to 50% the proportion of adults age 50+ who have ever had a sigmoidoscopy; no Healthy People 2010 target has been set for the proportion of adults who should receive colonoscopy screenings.

Figure 21. Percent Reporting Having Ever Had a Colorectal Screening Test, and Type of Test



Source: California Health Interview Survey, 2007

These cancer screening rates in Lake County belie a major disparity in screening, however. The CHIS findings cited above may not adequately represent low-income individuals who may be less likely to have access to or be able to pay for these tests. Unlike cervical and breast cancers, there is no state- or federally-funded program to subsidize or cover colorectal cancer screening. If Lake County is similar to the rest of California, Latino adults age 50+ are about one-third less likely than Non-Latino Whites to have had a sigmoidoscopy/colonoscopy in the last five years.[163]

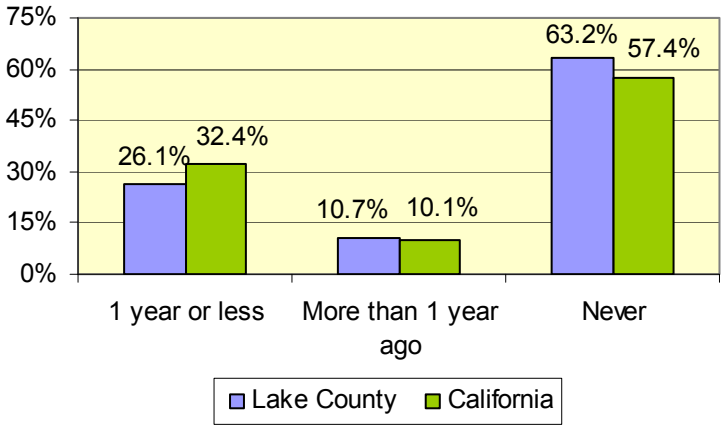
Prostate Cancer Screening

Research has not yet proven that the potential benefits of testing outweigh the harms of testing and treatment. It is definitely an issue of informed personal choice. The American Cancer Society recommends that starting at age 50 (age 45 for African Americans and men with a father or brother who had prostate cancer before age 65), men talk with their doctor about the pros and cons of testing to make an informed choice about whether being tested for prostate cancer is the right choice for them. ACS guidelines recommend men who decide to be tested should have the PSA blood test, with or without a rectal exam. How often they are tested depends on their PSA level.[164]

Slightly over 63% of Lake County men age 40+ who responded to the 2005 CHIS reported they had never received a screening test for prostate cancer (Figure 22 on the next page), a higher proportion than men statewide.

[163] Ibid.
[164] www.cancer.org/cancerscreeningguidlines. Accessed 8/4/10.

Figure 22. Prostate Cancer Screening History



Source: California Health Interview Survey, 2005

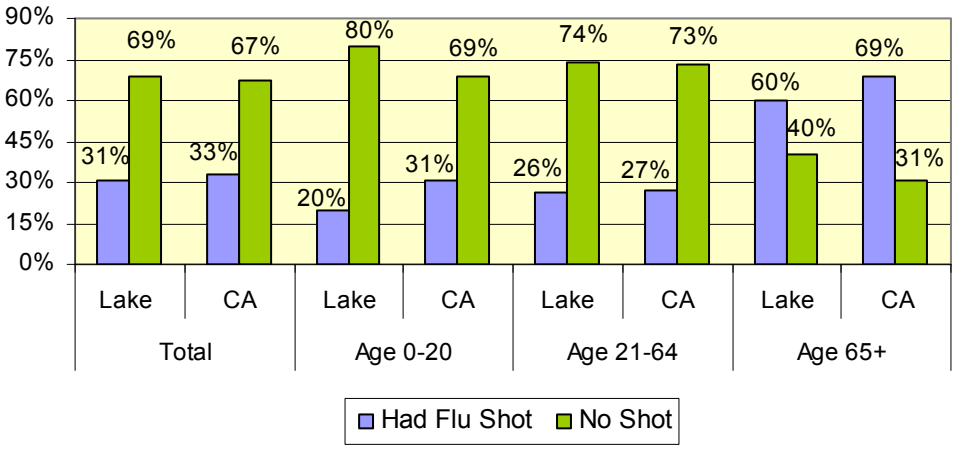
Flu Vaccination

The seasonal flu vaccine protects against three influenza viruses that research indicates will be most common during the upcoming season. The Centers for Disease Control and Prevention recommends that everyone 6 months and older should get a flu vaccine each year starting with the 2010-2011 influenza season. According to the CDC, it is especially important that certain groups get vaccinated either because they are at high risk of having serious flu-related complications or because they live with or care for people at high risk for developing flu-related complications. Examples of such groups include pregnant women, children younger than 5, but especially children younger than 2 years old, people 50 years of age and older, people of any age with certain chronic medical conditions, and health care workers.[165]

In 2007, fewer Lake County respondents to CHIS than Californian respondents on average, of all age groups, reported having had a flu shot within the last year (Figure 23 on the next page). Despite the CDC recommendations, only 3 in 10 Lake County residents received a vaccination, and 6 in 10 seniors received it.

[165] http://www.cdc.gov/flu/about/qa/flushot.htm. Accessed 8/5/10.

Figure 23. Flu Shot Within Last Year



Source: California Health Interview Survey, 2005

SECTION III. HEALTH RESOURCE AVAILABILITY AND UTILIZATION

"I didn't get treated for months because I didn't know the clinic was right here." –Focus group participant

Planning services and programs and allocating funds depends on the availability of local resources. Indicators of resource availability in a community include geographic distribution, supply, and capacity relative to a population's health status, risks, and disparities. For example, improving adverse health status levels in high risk, low resource communities may indicate the need for more targeted funding and technical assistance.[166]

Acute Care Hospitals

Hospital Utilization[167]

Hospital utilization is determined by the number of available beds in acute care hospitals, the number of patient days, and the occupancy rates. From 2001-2008, the occupancy rate of Lake County hospitals has averaged 42%, well below the California average of 61% for the same period (Table 49). However, the difference between the local and statewide occupancy averages based on licensed beds may be misleading, as both Lake County hospitals are designated as Critical Access Hospitals (CAHs).

Table 49. Hospital Utilization for Lake County with State Comparisons, 2001-2008

Year	St Helena Hospital Clearlake	Sutter Lakeside Hospital	Available Beds (Lake County)	Patient Days (Lake County)	Occupancy Rate (Lake County)	Occupancy Rate (California)
2003		X	69	9,277	36.8%	61.9%
2004	X	X	101	15,364	46.6%	63.2%
2005	X	X	101	15,679	42.5%	61.9%
2006	X	X	101	16,460	44.7%	62.3%
2007	X	X	101	15,690	42.56%	62.08%
2008	X	X	81	13,064	42.11%	61.46%

Source: California Office of Statewide Health Planning and Development

[166] Petersen DJ, Alexander GR. Needs Assessment in Public Health. Kluwer Academic/Plenum Publishers, New York. 2001.

[167] Information for this section was accessed at: http://www.oshpd.ca.gov/hid/Products/Hospitals/Utilization/Hospital_Utilization.html, accessed 2/26/10 and 03/17/10.

CAHs are hospitals that are located in a rural area over 35 miles from another hospital. (A rural hospital that is 15 miles from another hospital in mountainous terrain, or areas with only secondary roads, may also qualify as a CAH.) Regardless of the number of beds for which they are licensed, CAHs are limited to using a maximum of 25 beds for inpatient or "swing bed"—acute or skilled nursing facility care—purposes, and would be penalized for going over that limit except in cases of emergencies, such as a pandemic, when a waiver is needed. CAH hospitals also have length-of-stay requirements: acute inpatient care that doesn't exceed, on an annual basis, an average length of stay of 96 hours. Having a CAH designation allows the hospital to be paid by Medicare for most inpatient and outpatient services to Medicare beneficiaries 101% of their allowable and reasonable costs. As of March 2007, there were 28 CAH hospitals in California.[168]

Hospital Outpatient Visits[169]

Hospital outpatient visits, which include ED visits, were compared to the overall county population. The visits per resident were calculated for Lake County and the state of California. From 2000-2008, there was an average of 3.6 outpatient visits each year per Lake County resident, three times as many as the statewide average of 1.2 outpatient visits per resident for the same period (Table 50).

Table 50. Hospital Outpatient Visits for Lake County with State Comparisons, 2000-2008

Year	Lake County Outpatient Visits	Lake County Population[170]	Average Outpatient visits per resident (Lake County)	Average Outpatient visits per resident (California)
2000	191,409	58,548	3.3	1.2
2001	199,427	60,107	3.3	1.2
2002	208,631	61,069	3.4	1.2
2003	262,436	61,984	4.2	1.2
2004	249,718	62,685	4.0	1.2
2005	231,878	63,177	3.7	1.1
2006	240,022	63,768	3.8	1.1
2007	251,459	63,822	3.9	1.1
2008	201,320	64,193	3.1	1.1

Source: California Office of Statewide Health Planning and Development

[168] Critical Access Hospital. Fact Sheet. Office of Statewide Health Planning and Development. March 2007. http://www.oshpd.ca.gov/RHPC/pdf/Ruralhospital/CritAccessHosp07fctsht1.pdf.
[169] Information for this section was accessed at: http://www.oshpd.ca.gov/HID/Products/Hospitals/AnnFinanData/PivotProfles/default.asp, 03/17/10.
[170] State of California, Department of Finance, California County Population Estimates and Components of Change by Year, July 1, 2000-2009. Sacramento, California, December 2009. Accessed at http://www.dof.ca.gov/research/demographic/reports/estimates/e-2/2000-09/, 03/18/10.

Emergency Department (ED) Visits[171]

Emergency department (ED) visits were calculated per 1,000 residents for Lake County and California. The percentage of Lake County ED visits that resulted in hospital admission were also compared with statewide data. The rate of ED visits per 1,000 residents appears to be increasing in Lake County and to be stable statewide from 2001-2008.

When compared to the statewide rate of using the ED, Lake County residents have twice as many visits per 1,000 residents: an average of 475 ED visits per 1,000 residents in Lake County versus 271 ED visits per 1,000 residents statewide from 2001-2008. On average, 7% of ED visits in Lake County result in hospital admission compared to 15% of ED visits statewide from 2001-2008, as show in Table 51.

Table 51. Emergency Department (ED) Visits for Lake County and California, 2001-2008

Year	Number of ED visits (Lake County)	Lake County Population	ED visits per 1,000 residents (Lake County)	ED visits per 1,000 residents (California)	Percentage of ED visits resulting in admission (Lake County)	Percentage of ED visits resulting in admission (California)
2001	26,626	60,107	443	287	9%	15%
2002	20,561	61,069	337	259	7%	13%
2003	23,622	61,984	381	272	6%	14%
2004	32,223	62,685	514	251	8%	15%
2005	31,612	63,177	500	267	8%	15%
2006	33,941	63,768	532	270	7%	16%
2007	35,459	63,822	556	270	7%	16%
2008	34,270	64,193	534	287	6%	16%

Source: California Office of Statewide Health Planning and Development

The most common problems or diagnoses that brought people to the emergency department in 2009 were somewhat similar between the two hospitals, although not always in the same order of reason for the visit (Table 52 on the next page). A total of 38.6% of the ED diagnoses at St. Helena Clearlake were for "symptoms" (unspecified in the publicly-reported data) and 22.5% were related to injury/poisonings/complications. These were also the most common reasons for Sutter Lakeside, but in reverse order at 19.3% and 21.5%, respectively.

[171] Information for this section was accessed at: http://www.oshpd.ca.gov/hid/Products/Hospitals/Utilization/Hospital_Utilization.html, accessed 2/26/10 and 03/17/10

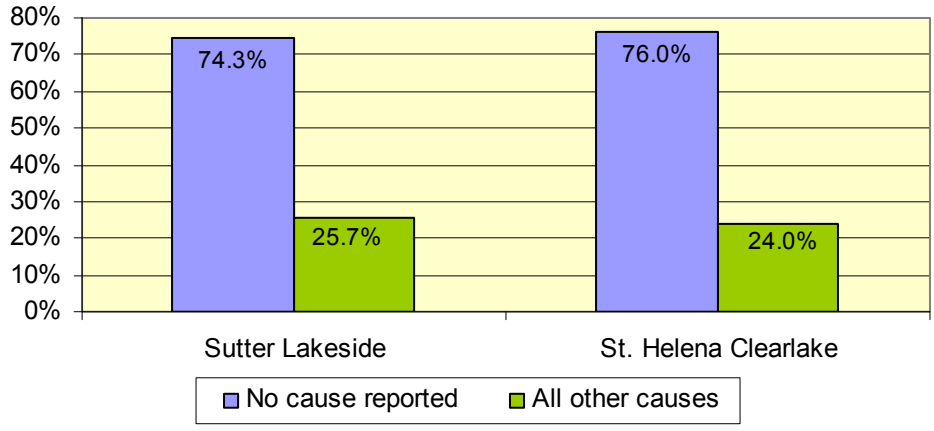
Table 52. Reasons (by Diagnosis) for ED Visits to Lake County Hospitals, 1/1/09-9/30/09

Sutter Lakeside Hospital		St. Helena Hospital/Clearlake	
Principle Diagnosis Group	%	Principle Diagnosis Group	%
Injury/Poisonings/Complications	21.5	"Symptoms"	36.8
"Symptoms"	19.3	Injury/Poisonings/Complications	22.5
Respiratory System	11.7	Musculoskeletal System	7.6
Musculoskeletal System	7.6	Respiratory System	6.4
Digestive System	7.5	Skin Disorders	5.0
Nervous System	7.0	Nervous System	4.6
Skin Disorders	5.4	Digestive System	4.1
Genitourinary System	4.9	Mental Disorders	3.9
Other Reasons	4.2	Genitourinary System	2.6
Circulatory System	3.9	Pregnancies/Perinatal	2.3
Mental Disorders	2.0	Circulatory System	1.5
Pregnancies/Perinatal	1.7	Endocrine System	1.2
Infections	1.7	Other Reasons	0.9
Endocrine System	1.5	Infections	0.8

Source: California Office of Statewide Health Planning and Development

Interestingly, about three-quarters of the injury group diagnoses were reported without specificity as "no principle cause reported" by both hospitals (Figure 24). The remaining one-quarter of the injury causes were mainly due to "other accidents" and "accidental falls."

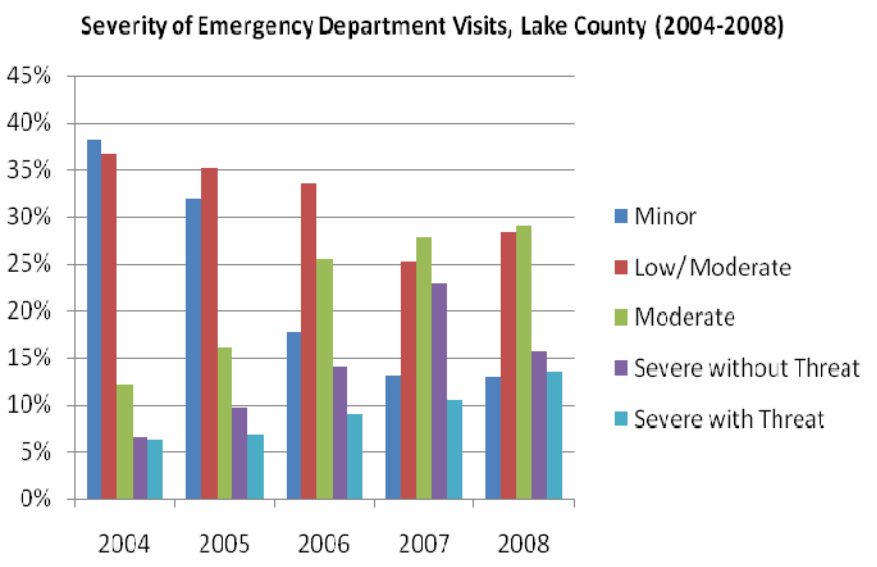
Figure 24. Principle Cause of Injury, Lake County Hospitals, 1/1/09 - 9/30/09



Source: California Office of Statewide Health Planning and Development

Emergency department visits in Lake County were also examined for trends in severity.[172] Since 2004, the percentage of visits for minor and low/moderate severity has decreased and the number of visits for moderate, severe without threat and severe with threat has increased (Figure 25).

Figure 25.



Source: California Office of Statewide Health Planning and Development

Community-Based and Specialty Clinics

Lakeside Health Center[173]

The Lakeside Health Center was opened in 1999 by Mendocino Community Health Clinic, Inc. The Center is a Federally Qualified Health Center (FQHC), which means that it receives enhanced Medicare and Medicaid reimbursement, eligibility to purchase prescription and non-prescription medications for outpatients at reduced cost, and automatic designation as a Health Professional Shortage Area.

Located in Lakeport, the health center has a van to assist patients in accessing services, and has obtained a bus stop in front of the center to ease transportation concerns for their patients. Services are provided for individuals regardless of their ability to pay.

[172] Data from 2001 used different reporting categories and in 2002 and 2003 only three of the five categories were used. The years included had the most consistent reporting for comparison purposes.
[173] Information for this section accessed at http://www.mchcinc.org/centers/lakeside-center.php, 03/16/10.

The health center provides medical, dental and counseling services. Primary care services include preventive care as well as case management and care for those with chronic medical conditions, as the clinic reports that "almost one-third of our patients have some form of chronic illness and the overwhelming numbers of these individuals have multiple disorders." Services include comprehensive primary care medical services including physical exams, chronic disease management services, health maintenance support, immunizations, well-child care, CHDP exams, addiction medicine, and various screenings. Lakeside also offers an HIV/AIDS Ryan White program which includes comprehensive primary care and testing for people living with HIV/AIDS.

Mental health services are offered through Primary Care Consultation (PCC) with a Licensed Clinical Social Worker. Lakeside's program integrates primary medical care with behavioral health counseling designed to serve patients whose health is affected by stress, who have problems maintaining healthy lifestyles, and who are affected by psychological disorders. Additionally, Lakeside offers psychiatric services in English and Spanish, and has 2 psychiatrists who come to Lake County every week. Comprehensive dental care is provided by dentists on site. The clinic offers routine dental exams as well as "access to gum treatment, sealants, tooth-colored fillings, dentures and emergency care. Special programs include HIV dental care, a nursing facility dental outreach program, oral health care for pregnant women and a commitment to community outreach that allows MCHC to implement short-term, community-based service projects including on-site screenings at migrant education schools."

Table 53 displays clinic utilization from 2005 to 2009. From 2005-2009, there was a 20% decrease in the overall number of visits for the selected services due to the changes in Medi-Cal reimbursement for adult dental and chiropractic services.

Table 53. Mendocino Community Health Clinic-Lakeside: Clinic Utilization Data, 2005-2008[174,175]

	2005	2006	2007	2008	2009
Annual encounters	42,089	29,712	30,932	29,965	33,704

Lake County Tribal Health[176]

With a stated mission "to improve the physical, mental, spiritual, emotional and social health status of the American Indians of Lake County through the provision of culturally sensitive health care services", Lake County Tribal Health (LCTH) provides medical, dental and mental health services to all community members. This organization is a

[174] Data accessed at http://www.oshpd.ca.gov/hid/Products/Hospitals/Utilization/PC_SC_Utilization.html, 03/26/10.
[175] 2009 data was provided by staff of the Mendocino Community Health Clinic-Lakeside from the 2009 Annual Utilization Report.
[176] All information for this section was accessed at http://www.lcthc.com/, 03/16/10.

Federally Qualified Health Center Look-Alike, receiving many of the same benefits as an FQHC as described above.

LCTH staffs a Patient Resource Advocate to assist patients with their payment options. The organization accepts Medicare, Medi-Cal, private insurance, and cash, and offers a sliding fee scale to those who qualify. Lake County residents using public transit are served by Lake Transit with a bus stop directly in front of LCTH.

Primary care services, including preventive care, acute illness and injury treatment and management of chronic conditions are provided in the Lakeport clinic. LCTH offers a medical staff of 2 physicians and one Physician Assistant who are supported by an experienced nursing staff. One physician is bi-lingual (Spanish). Vision screening and various laboratory tests are also offered. Medical services also include the following specialties: Podiatry, Chiropractic Medicine, Acupuncture and Women's Health.

Dental care includes preventive and routine dental care. Two dentists are available, one of whom specializes in children's dentistry.

Mental health care is provided by licensed and certified staff (the clinic uses the term Human Services). The clinic provides individual and family counseling and child play-therapy for the Native American/Alaskan Native population of every age. It also sponsor[s] cultural wellness and traditional basket making and craft classes, recovery support groups, parenting groups, a therapeutic parent-child development program (from toddlers through pre-school) and a GED preparation/job skills class. Table 54 displays the clinic utilization from 2005 to 2008. The number of visits increased 5% from 2005 to 2008.

Table 54. Lake County Tribal Health Consortium, Inc., Clinic Utilization Data, 2005-2008[177]

	2005	2006	2007	2008
Annual encounters	13,437	14,080	14,180	14,136

Sutter Lakeside Hospital[178]

Family Medical Clinic

The Family Medical Clinic was established in 2004 and is located at the site of Sutter Lakeside Hospital. Currently the clinic provides a family-centered focus and offers general family medicine, occupational medicine and orthopedics, obstetrics, gynecology and podiatry.

[177] Data accessed at http://www.oshpd.ca.gov/hid/Products/Hospitals/Utilization/PC_SC_Utilization.html, 03/26/10.
[178] Information for this section was accessed at http://www.sutterlakeside.org/pat-services/outpatient-services.html, 03/16/10.

Upper Lake Community Health Clinic

The Upper Lake Community Health Clinic was established in 1997 and is located on the campus of Upper Lake High School. The clinic reports a Family Nurse Practitioner and her team provide services for general adult and pediatric care, women's health, teen health and family planning.

St Helena Hospital Clearlake[179]

Clearlake Family Health Center

The health center provides medical, dental and mental health services in Clearlake. The clinic is intended to serve Lake County residents who are uninsured. Services are provided by a variety of practitioners including family practice physicians, internal medicine physicians, pediatricians, general surgeons, urologists, cardiologists, a podiatrist, neurologist, gynecologist, certified nurse-midwife, nurse-practitioners, licensed clinical psychologists and clinical social workers.

The clinic reports an average of 5,000 medical and mental health care visits each month.

Clearlake Family Dental Clinic

The dental clinic, co-located in The Clearlake Family Health Center, reports 700 visits per month and a staff of four dentists. Services provided include preventive care, fillings, extractions, crowns and dentures.

Middletown Family Health Center

The Middletown Family Health Center provides medical services including family practice, OB/GYN and Women's Services. It is staffed by a physician, a nurse practitioner and a physician's assistant.

Kelseyville Family Health Center

The Kelseyville Family Health Center provides medical care Monday through Friday and access to mental health and specialty services on Mondays. Services include family practice, podiatry, behavioral health and lab testing. Practitioners include a physician, a nurse practitioner, a licensed clinical social worker and a podiatrist.

Hidden Valley Medical Services

The Hidden Valley Medical Services clinic provides medical and specialty services. Services include: internal medicine, OB/GYN and women's services, neurology,

[179] Information for this section accessed at: http://www.shhclearlake.org/services.shtml, 03/16/10

medical-surgical specialties, laboratory and X-ray services. Care is provided by appointment.

Planned Parenthood Shasta-Diablo[180]

Planned Parenthood Shasta-Diablo provides free or low cost reproductive health care services in Clearlake three days each week. Services include: birth control, pregnancy testing, testing for sexually transmitted infections, HIV testing and vaccines. The clinic reports 446 client visits from July 2008-June 2009 and 543 client visits from July 2009 through April 2010.

Table 55 on that begins on the following page provides an overview of health services available in community clinics in Lake County.

[180] Information for this section was accessed at http://www.co.lake.ca.us/Residents/Disclaimer/ResourceDirectory/Organizations/Planned_Parenthood.htm, 03/16/10, and from information submitted by the agency.

Table 55. Overview of Health Services Available in Community Clinics: Lake County, 2009

Clinic Name	Clinic Location	Primary Care	Mental Health	Dental Services	Case Management and Support for Chronic Illnesses	Specialty Services	Languages	Transport
Lakeside Health Center	Lakeport	Yes	Yes	Yes	Yes	Psychiatrist services, Women's Health, HIV/AIDS	English Spanish	Van available Bus Stop (?)
Lake County Tribal Health	Lakeport	Yes M-Th: 7:30-3:40 F: 7:30-12:00	Yes *Clinic uses term "Human services" for MH care*	Yes M-F: 8:30-5	Yes	Podiatry, Chiropractic, Accupunct-ure, children's dentistry, women's health	English Spanish Chinese	Van available for eligible Native American Lake County residents
Sutter Lakeside Hospital Family Medical Clinic	Lakeport	Yes				Occupational medicine Orthopedics OB/GYN Podiatry	English	
Sutter Lakeside Hospital: Upper Lake Medical Clinic	Upper Lake	Yes					English	
St Helena Hospital Clearlake: Clearlake Family Health Center	Clearlake *(co-located with the Clearlake Family Dental Clinic)*	Yes M-Th: 8- 8 Friday: 8-5 Sat & Sun: 1-4:30 pm	Yes M-Th: 8- 8 Friday: 8-5 Sat & Sun: 1-4:30 pm		Yes	Surgery Podiatry Urologist Cardiologist Neurology Gynecology Physical Therapy Nutrition	English	
St Helena Hospital Clearlake: Clearlake Family Dental Clinic	Clearlake *(co-located with the Clearlake Family Health Center)*			Yes M-F: 8-5			English	Yes, for children 0-5
St Helena Hospital Clearlake: Middletown Family Health Center	Middletown	Yes M-F: 9-5					English	

Clinic Name	Clinic Location	Primary Care	Mental Health	Dental Services	Case Management and Support for Chronic Illnesses	Specialty Services	Languages	Transport
St Helena Hospital Clearlake: Kelseyville Family Health Center	Kelseyville	Yes M-F: 9-5	Yes Monday afternoons			Podiatry Mondays	English	
St Helena Hospital Clearlake: Hidden Valley Medical Clinic	Hidden Valley Lake	Yes				Internal Medicine OB/GYN and Women's Services Neurology Medical-Surgical Specialties Laboratory and X-ray Services	English	
Planned Parenthood: Shasta-Diablo	Clearlake	Reproductive Health Care T, Th, F					English	

Community-based dental services are provided by Lakeside Health Center, Lake County Tribal Health, St. Helena Hospital Clearlake: Clearlake Family Dental Clinic and the Lake County Office of Education ACCESS dental van. Two locations are in Lakeport with available transportation and one location is in Clearlake. According to the clinic dental directors, as of April 2010, the full-time equivalent (FTE) dentists in these clinics are: 1.5 FTE Tribal Health; 2 FTE Lakeside; 1 FTE Clearlake. The location of the dental van varies as is shown in Table 56 on the next page.

The Lake County Department of Public Health provides a Dental Disease Prevention Program to bring dental education to pre-schools, schools and community groups. The Lake County Office of Education (LCOE), with funding from First 5 Lake County, "works with parents and children to educate them about and provide access to oral health care and treatment."[181] The LCOE Oral Health Project includes dental and nutrition education for preschool children and their parents, screenings in preschool and kindergarten classrooms, a mobile dental clinic serving uninsured children 0-5 years old

[181] First 5 Lake County, Evaluation Status Report for Funding Year 2008-09, December 2009. Prepared by Cathy Ferron, Ferron & Associates, page 20.

without insurance, and a partnership with Healthy Start to transport children and families to the Clearlake Family Dental Clinic.

Northern Lake County "is a designated Dental Health Professional Shortage Area. Patients are required to travel 2 or 3 counties away for oral surgery, sedation, perio-care, endodontics, and any Medicaid orthodontia."[182]

Table 56. Availability of Dental Services at Community-Based Clinics in Lake County

Clinic Name	Location	Dental Services	Languages	Transportation
Lakeside Health Center	Lakeport	▪ Preventive and routine care ▪ Emergency care ▪ HIV dental care ▪ Dental Outreach ▪ Oral Health for pregnant women ▪ Onsite screenings	English Spanish	Van available Bus Stop
Lake County Tribal Health	Lakeport M-F: 7:30-12:00	▪ Preventive and routine care ▪ Children's dentistry	English Spanish	Van available for eligible Native American Lake County residents
St Helena Hospital Clearlake: Clearlake Family Dental Clinic	Clearlake *(co-located with the Clearlake Family Health Center)* M-F: 8-5	▪ Preventive and routine care		Yes, for children 0-5

The number of dental visits reported by the Lake County community clinics during 2005-2009 is shown in Table 57 on the next page.

[182] Executive Summary of the Local Health Jurisdiction Lake County MCAH Needs Assessment 2010-2014. Personal communication with Jane MacLean, Lake County Public Health MCHA Director & Director of Nursing.

Table 57. Dental Visits at Community Clinics: Lake County, 2005-2009

	Number of Dental Visits				
Service Location	2005	2006	2007	2008	2009
Lake County Tribal Health[183]	3,346	3,824	3,565	3,814	n/a
Lakeside Clinic[184]	23,290	16,441	10,697	10,305	11,619
Clearlake Family Dental Clinic[185]	n/a	213	2,538	2,650	8,400
LCOE Oral Health Project, ACCESS dental van (2008-2009 data)[186]				252	

n/a = not available.

Veterans Clinic

After many years of advocacy by Lake County Veterans Services, the Veterans Administration is establishing a new medical facility in the City of Clearlake that is expected to open in October 2010. (The closest VA facilities currently are Ukiah and Santa Rosa, which exceed the 30-mile distance requirement for availability.) The new Lake County VA clinic facility—the remodeled site of a former bank building—will serve an estimated 8,000 veterans (dependents are not eligible to receive services from the clinic), who make up close to 13% of the county's population, and offer general medical and mental health services.

Medical specialty services are anticipated to be available on a rotating schedule, e.g., 1-2 days a month, by specialists from the San Francisco VA Hospital (which has jurisdiction over the Lake County facility). The clinic is expected to be staffed by 3-4 physicians and 1 physician assistant or nurse practitioner per doctor, along with other general clinic support staff. Mental health services will be provided by 1-2 psychologists and 1 psychiatrist who can prescribe and dispense medications. The San Francisco VA is responsible for recruiting health care staff—some of whom may be hired away from existing local medical practices, hospitals, and clinics.

The medical clinic will be open Monday-Friday from 8:00 a.m. – 4:00 p.m. Except for a modest co-pay of $8 for a 30-day prescription, all services are free to single veterans making less than $30,000 a year, and married veterans with an annual family income less than $35,000. Veterans with higher incomes will pay a full co-pay for all services. The clinic will bill private insurance but not Medi-Cal.

[183] Information for this table assessed at: http://www.oshpd.ca.gov/hid/Products/Hospitals/Utilization/PC_SC_Utilization.html, 03/26/10.
[184] Ibid. 2009 data submitted by provider from Annual Utilization Report.
[185] An estimate of 700 patients per month was published by the provider: http://www.shhclearlake.org/clinics/family_dental_center.shtml, accessed 3/26/10.
[186] First 5 Lake County, Evaluation Status Report for Funding Year 2008-09, December 2009. Ferron & Associates.

PHYSICIAN AND DENTIST SUPPLY

The local supply and ratios of licensed primary care physicians and licensed dentists to the total population are core indicators for community health service availability. However, the supply of physicians and dentists is only one component of access to medical and dental care services. The ratios do not indicate which providers serve low-income persons or those without insurance, or indicate how much time providers spend in active practice; some only work part-time, for example. The data also do not address geographic distribution and provider willingness to accept Medi-Cal—or the presence of a community clinic providing dental services and medical services—factors that influence adequate and timely access to services within a county.

Physicians in Active Practice[187]

The adequacy of physician supply is generally evaluated based on the number of physicians per 100,000 civilian population, a useful benchmark for gauging adequacy. According to the Council on Graduate Medical Education (COGME), the national commission that publishes ranges for physician supply requirements, an appropriate range for *overall* physician supply is 145-185 patient-care physicians per 100,000 population.[188] With 78 non-federal, patient-care physicians active in Lake County in 2008, the county had 118 patient-care physicians per 100,000 population.[189] Lake thus ranks extremely low relative to the physician requirements estimated by COGME (Table 58 on the next page).

The COGME requirement estimates for *generalist* (primary care) physicians are 60-80 per 100,000 population, and for *specialists* it is 85-105 per 100,000 population. Thus, in 2008, with 58 generalists per 100,000 population, Lake County did not reach the lower end of the range for the primary care supply of COGME's estimated requirements. For specialists, the county fell further short of the bounds of low end of the range, with 59 specialists per 100,000 population. For all 3 ratios shown in Table 58, Lake fared much worse than the California average for these physician supply requirements. What these counts and ratios don't take into account, however, is that some specialists may come into the county part time, but it is not known exactly which specialists or how often.

[187] The data in this section are for MDs only and do not include DOs (Doctors of Osteopathic Medicine) which are licensed by their own medical board. DOs represent 7.7% of all licensed physicians in California; they account for 2.5% of those licensed to practice in Lake County. There are 2 DOs listed for Lake County according to the Osteopathic Medical Board of California, April 4, 2010.
[188] Council on Graduate Medical Education, 1996; Council on Graduate Medical Education, 1995.
[189] American Medical Association, 2000; California Department of Finance, 2000.

Table 58. Active Patient-Care Physicians and Ratio to Population, Lake and California

	Patient Care Physicians		Primary Care Physicians		Specialists	
	Total	*Per 100K Pop.*	*Total*	*Per 100K Pop.*	*Total*	*Per 100K Pop.*
Lake	78	118	38	58	39	59
California	66,480	174	22,528	59	43,951	115

Active patient care MDs practicing in California in 2008. Physicians with DO degrees are licensed by a different state board and so are not included in these data.
Primary Care Physicians= Family practice, general practice, internal medicine and pediatrics.
Specialists = Non-generalists, including unspecified specialty designations.
Source: AMA Masterfile, 2008; California Healthcare Foundation.

The number and percentage distribution of the patient care physicians are displayed by area of specialty in Table 59 below. Not surprisingly, Internal Medicine and Family Medicine—primary care physicians—account for 36.4% of the practice specialties, followed by General Practice at 12.1%. There are *no* specialists for 22 (51%) of the 43 reported medical specialties.

Table 59. Active Patient Care Physicians by Specialty, Lake County, 2008

	Allergy/ Immunol	Anesthes	Cardiology	Colo-rectal	Cosmetic	Dermat	ER	Endocrine	Family Med	General Surg	Geriatric
#	0	4	4	0	0	1	4	0	12	3	0
%	0.0	6.1	6.1	0.0	0.0	1.5	6.1	0.0	18.2	4.6	0.0
	Gastro-enterol	GP	Hematol	Infectious	Internal Med	Neonatal	Nephrol	Neurol	Neuro-Surg	OB-GYN	Occup
#	0	8	0	0	12	0	2	1	0	3	0
%	0.0	12.1	0.0	0.0	18.2	0.0	3.0	1.5	0.0	4.6	0.0
	Oncol	Opthalm	Orthoped Surg	Other Med	Otololaryn	Pain Med	Pathol	Peds	Phys Rehab	Plastic Surg	Psych
#	1	2	4	0	1	0	0	3	0	0	2
%	1.5	3.0	6.1	0.0	1.5	0.0	0.0	4.6	0.0	0.0	3.0
	Pulmon	Radiol	Radiat Oncol	Rheumat	Sleep Med	Sports Med	Surg Oncol	Thoracic Surg	Urology	Vascular	Missing Data
#	1	1	0	0	0	0	1	0	0	1	4
%	1.5	1.5	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	6.1

MDs per 1,000 population, based on California Medical Board counts, 2008.
Source: California Healthcare Foundation.

According to workforce studies and projections, the physician workforce is aging, and a large number of physicians are nearing retirement, at the same time that a large proportion of the population is aging, contributing to a growing demand for physician services.[190] The age distribution of Lake County physicians is shown in Table 60. Over 44% are older than 55 compared to one-third of physicians in that age group in the state as a whole.[191]

Table 60. Active Patient Care Physicians by Age, Lake County and California, 2008

	All ages	<30 yrs	30-35 yrs	36-45 yrs	46-55 yrs	56-65 yrs	66-75 yrs	75+ yrs
Lake								
No. of Doctors	78	0	0	15	28	28	6	1
% Distribution	0.0%	0.0%	0.0%	18.8%	36.4%	35.6%	7.8%	1.3%
California								
% Distribution		0.4%	9.2%	28.6%	28.0%	24.3%	7.9%	1.5%

Source: California Healthcare Foundation.

Dentists in Active Practice

According to available data, 25 licensed dentists are in active practice in Lake County, the majority located in the Cities of Lakeport and Clearlake, (33% and 29%, respectively) as shown in Table 61 on the next page. Of these 25 dentists, 79% are considered general or primary care dentists. While this is a proportion consistent with most other counties, the fact that there are *zero* dentists in 4 of the 6 specialty areas makes the proportion much less favorable for Lake County. It is also important to point out that even though a general dentist may offer *specialized* services because they received additional training, such as a pediatric oral health training course, and provide a much-needed resource, they are not a specialist in that area of dentistry.

At 1.48 primary care dentists per 4,000 population, Lake County is considered to have a "low" supply of general dentists according to the dentist-to-population ratios established by the American Dental Association.[192] Nearly the entire county is considered a Health

[190] *The Physician Workforce: Projections and Research into Current Issues Affecting Supply and Demand*. U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions. December 2008.
[191] Grumbach K, Chattopadhyay A, BIndman AB. *Fewer and More Specialized: A New Assessment of Physician Supply in California*, California Healthcare Foundation. June 2009.
[192] While there is no "ideal" population-to-provider ratio for dental health care, the ratio is ≥4,000:1 for geographic areas with unusually high needs according to the California Office of Statewide Health Planning and Development. The ratios are estimates based on American Dental Association 1998 data and 1998 population projections. The primary care dentist-to-population range for a "medium" supply of dentists is 3:5,000 – 5:5,000. Lake County's supply of general dentists, by contrast, is very low.

Professions Shortage Area for dentistry (as well as for primary care).[193] It is not known how many of the Lake County dentists take any Denti-Cal patients (which, now, is limited to primarily children), though the number is believed to be very low. The referral list of dentists taking new Denti-Cal patients published by the State Denti-Cal program, in April 2010 listed only Dr. Douglas Reams, a general dentist, for this resource,[194] although the community clinics accept Denti-Cal. It is also not known how many of the dentists may practice only part time, which has implications for access as well.

Table 61. Number of Dentists in Active Practice in Lake County by Type and Location

Type of Dentistry	City					Total
	Middletown	Clearlake	Lakeport	Kelseyville	Lucerne	
General	1	7	8	2	1	19
Endodontics	0	0	0	0	0	0
Oral Surgery	0	0	0	0	0	0
Orthodontics	0	1	1	0	0	2
Pediatric	0	0	0	0	0	0
Periodontics	0	0	0	0	0	0
Prosthodontics	1	0	1	0	0	2
Total	2	7	12	2	1	24

Source: California Dental Association Masterfile, accessed 4/12/10.

PUBLIC HEALTH SERVICES[195]

The Lake County Public Health Department offers a variety of programs at offices in Lakeport (there is no longer an office in Clearlake).

HIV/AIDS. HIV/AIDS education, drug assistance and case surveillance services are offered by the County. Evaluation for the AIDS Drug Assistance Program is arranged on an appointment basis. Public Health makes pamphlets available, but otherwise does not actively provide community education on HIV/AIDS. A limited amount of HIV testing is provided to Family PACT and Medi-Cal patients on request, and individual counseling and education is provided in conjunction with testing. The County no longer has funds to provide free confidential or anonymous testing. (Note: Community Care HIV/AIDS Program—CCHAP—provides a range of services, including case management, to people who have been diagnosed as living with HIV or AIDS.)

[193] The Health Resources and Services Administration Shortage Designation Branch develops shortage designation criteria and uses them to decide whether or not a geographic area, population group or facility is a Health Professional Shortage Area.
[194] http://www.denti-cal.ca.gov/provreferral/Lake.pdf. accessed 4/20/10.
[195] Information for this section was accessed at http://www.co.lake.ca.us/Government/Directory/Public_Health.htm, 3/17/10, and supplemented with material later provided by Public Health staff.

Communicable Disease Surveillance services are conducted to collect reports and monitor reportable communicable disease data to identify local needs and to control disease outbreaks.

California Children's Services (CCS)

The California Children's Services (CCS) program is available for children with physically-handicapping conditions. The program provides diagnostic evaluations, treatment and case management services for income-eligible families.

Dental Disease Prevention Program

Education on dental health, safety and nutrition is available through classrooms (pre-school to sixth grade) and to all community groups. The program also teaches brushing, flossing and fluoride rinsing and provides a dental sealant program.

Immunization Program

Immunizations are provided on weekdays. The program specifically serves infants, toddlers and school-aged children.

Women's Preventive Health

Lake County Public Health provides reproductive health care by appointment. The services are intended for low-income women without health insurance.

Maternal Child and Adolescent Health Program (MCAH)

The Maternal, Child and Adolescent Health (MCAH) programs offer referrals for prenatal, parenting and child health issues. Home visitation is also available for high-risk infants.

Medical Marijuana Identification Card Program (MMID)

The Medical Marijuana Identification Card program is voluntary for Lake County residents. Applications are accepted by appointment on Tuesdays and Thursdays at the Lakeport site.

MENTAL HEALTH SERVICES

Mental Health Services are provided by the county mental health department, the county office of education, non-profit providers, and several community clinics.

Lake County Mental Health[196]

Lake County Mental Health operates two clinics, one in Lakeport and one in Clearlake, that provide mental health and substance abuse services. The agency also operates a drop-in center with transitional housing in Clearlake. The range of services at the County clinics includes screening and assessment for serious mental illness; psychiatry and medication management and intensive case management; individual, group, and

[196] Information for this section accessed at: http://www.co.lake.ca.us/Government/Directory/Mental_Health.htm, 3/17/10

family counseling; outreach to older adults, Native American, and Latino populations; home visits; and transportation assistance by arrangement.

Staffing includes one adult psychiatrist who treats both adults and children, one child psychiatrist, six adult therapists and three child therapists.[197]

Lake County Office of Education[198]

The Lake County Office of Education provides school-based counseling services in the Lakeport, Lucerne, Upper Lake, Middletown, Kelseyville and Konocti School Districts. Individual, family and group counseling are available. Staffing includes twelve therapists.[199]

Lake Family Resource Center[200]

The behavioral health services at the Lake Family Resource Center have been developed specifically to address violence and abuse. Services include workshops and home-based services as well as psychotherapy for individuals and families.

Community Clinic-Based Mental Health Services

Table 62 on the following page summarizes the availability of mental health services provided in community clinics.

[197] Executive Summary of the Local Health Jurisdiction Lake County MCAH Needs Assessment 2010-2014. Jane MacLean, MSN, NP, RN, PHN, MCHA Director & Director of Nursing.
[198] Information for this section accessed at : http://www.co.lake.ca.us/Residents/Disclaimer/ResourceDirectory/Health___Human_Care/SafeSchools.htm, 03/17/10.
[199] Executive Summary of the Local Health Jurisdiction Lake County MCAH Needs Assessment 2010-2014. Jane MacLean, Lake County Public Health MCHA Director & Director of Nursing.
[200] Information for this section was accessed at: http://www.lakefrc.org/behavioral-health-services.html, 03/17/10.

Table 62. Availability of Mental Health Services in Community Clinics, Lake County

Clinic Name	Location	Mental Health Services Available	Languages	Transportation
Lakeside Health Center	Lakeport	▪ Integrated primary care/behavioral health program ▪ Psychiatry	English Spanish	Van available Bus Stop
Lake County Tribal Health	Lakeport	▪ Individual and family counseling and child-play therapy ▪ Cultural wellness ▪ Support Groups ▪ Therapeutic parent-child development program	English	Van available for eligible Native American Lake County residents
St Helena Hospital Clearlake: Clearlake Family Health Center	Clearlake *(co-located with the Clearlake Family Dental Clinic)* M-Th: 8- 8 Friday: 8-5 Sat & Sun: 1-4:30 pm	▪ Clinical psychologists and clinical social workers available	English	
St Helena Hospital Clearlake: Kelseyville Family Health Center	Kelseyville Monday afternoons	▪ Licensed Clinical Social Worker	English	

Section IV. Other Related Assessments that Demonstrate Unmet Needs

"All health needs could be met with hard work and dedication to healthy lifestyle. People are responsible for their own health needs. I have my insurance and can find my own doctors."
—Respondent to the Healthy Lake County Community Survey

"There's not enough help for low-income people who need more information and money to eat healthy and exercise."—Respondent to the Healthy Lake County Community Survey

Lake County public and non-profit organizations have performed several needs assessments and community-based studies to better understand how the available resources address the current health needs. The most recent related needs assessments, that helped to inform the present community health needs assessment, are summarized in this section.

AREA AGENCY ON AGING OF LAKE AND MENDOCINO COUNTIES

The Area Agency on Aging of Lake and Mendocino Counties developed a needs assessment to determine the extent of the need for supportive services, nutrition services and for multi-purpose senior centers…and to evaluate the effectiveness of resources in meeting these local needs.[201] The needs assessment was conducted using data from the Department of Finance, the U.S. Census, local agencies that serve adults, and a survey of older adults living in Lake and Mendocino counties. For the purposes of this report, only the findings for Lake County are discussed.

Key findings included:

- **High rates of disabilities among seniors:** Half of the individuals age 65 and over who are living in Lake County report a disability (50.1%) compared to 40.9% of individuals age 65 and over in California.[202]

[201] Area Agency on Aging of Lake and Mendocino Counties, 2008-2009 Area Plan Needs Assessment.
[202] Ibid. Data are from the US Census, 2005-2007 American Community Survey 3-Year Estimates.

- **High rates of suicide among seniors:** Between 2000 and 2006, 37 individuals age 65 and older attempted suicide and 22 committed suicide in Lake County. The report notes concern that the "success rate of suicide attempts [for seniors] is considerably greater…than other age groups. This suggests that seniors are more serious about suicide and have the resources to succeed in an attempt at suicide."[203] The suicide success rate was 59.5% for those 65 and over and 16.1% for those under 65.

- **Difficulties in a number of health-related areas:** According to a survey of older adults, the top 10 problems for Lake County residents over 60 years old were identified and ranked as shown in Table 63 below:

Table 63. Top 10 Problems Facing Lake County Individuals Age 60 and Over, 2007

Rank	Problem	Percentage of Respondents (n=564)
1	Household Chores	33.2%
2	Affordable Dental Care	30.3%
3	Getting Enough Exercise	26.4%
4	Grocery Shopping	24.8%
5	Mobility	24.6%
6	Communication (hearing loss or low vision)	22.2%
7	Falling or Other Accidents in the Home	22.0%
8	Sleeping	19.3%
9	Money to Live On	18.4%
10	Transportation	18.4%

Source: Area Agency on Aging random sample community survey.

- Other health-related concerns included: Affordable Health Care (16.8%), Loneliness or Sadness (14.2%), Personal Care and Bathing (15.8%), Prescription Drugs (10.8%), Getting Enough Food (5.3%) and Finding a Doctor (4.1%).

The 2009-2012 Area Plan developed by the Area Agency on Aging of Lake and Mendocino Counties responded to the issues identified in the needs assessment. The four areas selected for focus in 2009-2012, and the rationale for their selection, were:

- Elder Abuse Prevention: Address issues of self abuse, financial abuse and staffing at long-term care centers.

- Ensuring Adequate Nutrition: The AAA-funded brown bag program is only able to deliver half the brown bags it has delivered in previous years due to decreased availability of food stuffs and inadequate funding.

[203] Ibid, page 10. Data are from the California Department of Public Health, EPIC Branch.

- Helping People Stay Safely in Their Own Homes: Provide a myriad of services and supports to help seniors stay safely in their homes.
- Promoting a Healthy Community: Education and training programs to promote healthy aging and reduce the need for social and medical services.

LAKE COUNTY MATERNAL, CHILD AND ADOLESCENT HEALTH (MCAH) NEEDS ASSESSMENT

The Lake County MCAH Needs Assessment: 2010-2014, highlights several areas of progress and/or concern based on the health status indicators from the California MCAH Branch.

The areas where progress was noted included:

- Decrease in teen births and teen parents
- Improvements in early prenatal care
- Reduction in motor vehicle injuries for children and youth

The areas of concern included:

- Pre term births, low birth weight infants, very low birth weight infants and breastfeeding
- Children in foster care

Additionally, the report outlined the circumstances that lead to the ongoing health challenges in Lake County such as high unemployment and low wages; lack of community understanding of the cost-benefits of health care for mothers and young children, the lack of political will to invest in such services; certain environmental problems; inadequate access to health care; and the continuing nursing shortage, especially in rural areas.

Accordingly, the MCAH priority health issues for 2010-2014 are:

1. Prenatal care
2. Births to teen mothers
3. Breastfeeding
4. Intimate Partner Violence
5. Perinatal substance abuse
6. Oral health issues

LAKE COUNTY MENTAL HEALTH

In 2004-2005, in order to complete the Lake County Mental Health Department Mental Health Services Act (MHSA) 3-Year Plan for Community Services and Support (CSS), Lake County Mental Health conducted surveys with Lake County residents to understand their mental health needs and concerns. Responses were returned from

the local chapter of the National Alliance on Mental Illness and the Mental Health Board as well as from community questionnaires (n=182). The steering committee and the MHSA work group reviewed all the data collected and identified the county issues as shown in Table 64; those with a priority of 1-3 were selected to be addressed in the 2005-2008 funding cycle.[204]

Table 64. Lake County Mental Health Concerns, Prioritized by Age Group 2004-2005

Priority	Mental Health Concerns, by Age Group (n=182)			
	Children/Youth	**Transition Age Youth**	**Adults**	**Older Adults**
1	Lack of early access to services	Isolation, leading to lack of early identification of mental health issues	Homelessness/ Hospitalization/ Incarceration	Inability to live independently/ involuntary care/ institutionalization
2	School failure/inability to be in mainstream	Inability to manage independence/work	Isolation, arising from stigma of mental illness, geography, transportation, etc.	Isolation
3	Peer and family problems	Institutionalization/ incarceration	Inability to manage independence	Lack of acceptance, tolerance, understanding of older adults
4	Involvement in juvenile justice system			
5	Out of home and out of area placement			

Other issues discussed in the Mental Health CSS plan included:

- High Rates of Disability
- High Rates of Substance Abuse
- Poverty

[204] Lake County Mental Health Department Mental Health Services Act 3-Year Plan For Community Services And Support, Part II, Section 1, Identifying Community Issues., page 30., accessed at http://www.co.lake.ca.us/Assets/Mental+Health_AODS/docs/MH/MHSA+3+Year+Plan.pdf, 5/20/10.

The Prevention and Early Intervention Plan was completed in February 2010 and focuses on the community needs to address mental illness early. The plan begins by identifying these unserved/underserved groups.

- The uninsured/underinsured (all age groups).
- Homeless and those at risk of homelessness (all age groups).
- Children and youth transitioning from the juvenile justice system or from placements…without a transition plan.
- Adults transitioning from incarceration or at risk of incarceration, e.g., substance abuse issues.
- Native Americans… particularly elders and individuals of mixed Native-American/Latino heritage…
- Latinos, particularly recent immigrants and migrant farm workers.
- Indigenous migrants, e.g., Indians from Mexico, Central and South America, often assumed to be part of the Latino farm worker population.
- Older adults, especially those isolated, homebound, at risk of homelessness, and/or not utilizing available services, whether social, medical or mental health….
- Growing African American community.
- Impoverished new mothers and their babies…due to lack of resources and [outreach].
- Homeless, 'couch surfing' transitional age youth who are unserved due to their lack of visibility and reluctance to seek and/or engage available services.

The following key needs were identified and addressed in the resulting workplans:

- Support wellness and recovery at the first signs of a serious emotional disturbance or serious mental illness.
- The importance of early identification of behaviors that may indicate potential emotional or mental health problems in young children in school.
- Community-based resources for those populations that have been exposed to trauma.
- Expand the Friendly Visitor program to all homebound seniors in the county.
- Screen for postpartum depression, as a way to prevent early childhood trauma, and support mothers through the depressive symptoms that often occur after the birth of a child.
- Add outreach staff to the existing TAY Drop-in Center.
- Create mental health screening and treatment options outside of the county mental health department.
- Reduce stigma and discrimination about mental illness.

HEALTHY START

As part of seeking funding for programs to serve Lower Lake High School, Carle High School, Blue Heron, and the Clearlake Community School, Healthy Start distributed surveys to students, teachers, parents and community members to understand the

needs.[205] Teachers and community members were asked if issues and resources were a "low need, average need, or high need." As shown in Table 65, which lists "high needs" with greater than a 50% response rate, substance abuse, employment, and violence prevention were identified frequently.

Table 65. Teacher and Community Member Responses to "Most important Community Needs"

Community Need	% of Respondents Indicating "High Need" (n=70)
Substance Abuse Prevention/Treatment	90%
Child Abuse Prevention/Intervention	77%
More jobs/better paying jobs	74%
Domestic Violence Prevention/Intervention	73%
Recreation: community center, public recreation programs, etc.	70%
Public Pool	61%
General Health Care	59%
Safe, affordable, decent housing	57%
Mental health counseling	57%
Dental Care	56%
More child care options (all day, more subsidies, etc)	51%

Source: Healthy Start, Lake County Office of Education.

Teachers and community members also specified various training-related and information needs in the community as shown in Table 66.

Table 66. Teacher and Community Member Responses to "Most Important" Community Training/Information Needs

Training/information Need	% of Respondents Indicating "High Need" (n=70)
Employment Training/job skills	66%
Job Placement	59%
Parenting Skills: child development, discipline	46%
Health/hygiene	44%
English as a second Language	41%
Adult Education: GED or High School Diploma	40%
Adult Literacy and/or math tutoring	40%
Nutrition/weight loss/exercise	39%
Financial management/budgets	36%
Chronic disease prevention	31%

Source: Healthy Start, Lake County Office of Education.

[205] Data provided by Joan Reynolds, Lake County Office of Education, May 2010.

Students weighed in about local issues and concerns and were most concerned about jobs, family violence and housing (Table 67).

Table 67. Student Responses Concerning Issues/Local Problems?

Issues/Local Problems	Percentage of students indicating "Very Concerned" (n=43)
Availability of good jobs	77%
Family Violence	77%
Not enough decent affordable housing	72%
Unplanned pregnancies among teens	67%
Drug or alcohol abuse and addiction	63%
Hard to get health care	44%
Hard to get dental care	44%
Violence (shootings/assaults)	33%
Life skills	30%
Gangs and gang activity	28%

Source: Healthy Start, Lake County Office of Education.

When asked about the need for resources *for the community*, students again prioritized housing and jobs, consistent with their concerns about local issues and problems. However, a little more than half of the 43 respondents to this question cited the need for more public transportation and confidential family planning services (data not shown). When asked specifically about needed resources *for their fellow students*, the students were particularly concerned with safe places, college preparation, housing, and substance abuse as these services were mentioned by about three-quarters of the respondents (Table 68).

Table 68. Student Responses Concerning Extent Fellow Students Need Specific Services

Issue/Need	Percentage of students indicating "A lot" (n=43)
Safe places to go in family or personal crisis	77%
College preparation and counseling	72%
Safe, stable decent places to live	72%
Help with alcohol/drugs/tobacco problems	72%
Job readiness/job training	67%
Help with anger/conflicts	67%
Independent living skills (budgets, cooking, etc.)	63%
Family Planning	60%
Career counseling	58%
Homework help/tutoring	56%
Mentoring programs	53%

Source: Healthy Start, Lake County Office of Education.

MENTAL HEALTH DEPARTMENT, DIVISION OF ALCOHOL AND OTHER DRUG SERVICES

In February 2006, the Lake County Mental Health Department, Division of Alcohol and Other Drug (AOD) Services Prevention Program, conducted a needs assessment to better understand the issues surrounding substance abuse. Using input from focus groups, interviews, and surveys, the following priority areas emerged: [206]

- Lack of public awareness of AOD issues and prevention resources
- Underage alcohol and youth access
- Lack of positive activities and programs for youth
- High-risk alcohol consumption and related problems
- Methamphetamine use
- Limited coordination of collaboration among prevention providers

Based on the findings of focus groups and needs assessments, the Lake County Alcohol and Other Drug Services Prevention Program identified and prioritized six areas of focus for primary prevention for the next three years:

Priority Area I:	Increase public awareness and support of AOD prevention campaigns and activities.
Priority Area II:	Reduce alcohol-related problems associated with retail access to alcohol.
Priority Area III:	Create positive and healthy communities for and with young people.
Priority Area IV:	Reduce high-risk adult drinking and related problems.
Priority Area V:	Reduction of methamphetamine use and related problems.
Priority Area VI:	Increase participation and collaboration of community agencies and organization in preventing AOD-related problems.

FIRST 5 LAKE COUNTY

The First 5 Lake County 2008-2009 Evaluation Report described progress in addressing the strategic plan goal areas and an ongoing need to provide "access to children's health insurance…Parents continue to need assistance to find their way through the statewide system to document their eligibility and maintain enrollment."[207]

UPDATE TO THE LAKE COUNTY CHILDREN'S REPORT CARD

In 2007, the Lake County Department of Social Services, in cooperation with community partners, updated its March 2000 *Children's Report Card*. The primary purpose of the *Report Card* was to measure the impact of CalWORKs on the well-being of Lake

[206] Lake County Strategic Plan Development Process, The Mental Health Department, Division of Alcohol and Other Drug Services Prevention Program, page 3. Accessed at http://www.adp.state.ca.us/Prevention/pdf/strategic/Lake.pdf, 5/20/10.
[207] First 5 Lake County, Evaluation Status Report for Funding Year 2008-09, December 2009. Prepared by Cathy Ferron, Ferron And Associates.

County's children. That report, and the subsequent *Update*, provides detailed data, with local, state, and national context, to describe the lives of Lake County's children.[208] Key findings in the *Update* address many of the same demographic, socioeconomic, and health indicators included in this community health needs assessment. While the majority of data are dated from 2006 or slightly earlier, some areas of concern—which remain as concerns today—were noted to be the following:

- While children's access to health care services overall was noted to be improved, services are still concentrated in larger population areas, with transportation a continuing barrier.
- The proportion of homeless students is high, e.g., about 6.3% of the public school enrollment noted in one program.
- Children's levels of depression and anxiety suggest attempts to relieve the stress and its effects can lead to other problems, such as smoking, other substance abuse, school failure, isolation, alienation, and targeted violence.
- Juvenile delinquency was thought to be rising; juveniles entered the system at younger ages and with more problems than when the *Report Card* was originally written.
- The rise in the number of English Language Learners has increased the educational challenge.
- Childhood overweight and obesity appear to be on the rise.

Highlighted areas of improvement noted between 2000 and early 2007 included the following:

- The estimated immunization rate was higher.
- Entry into prenatal care was occurring earlier.
- Access to children's mental health services, while still a high need, had improved.
- Significant progress was noted in the availability of children's dental services.
- K-12 school-linked services in partnership with private providers were increasing the range of services available to children and families.

Although a number of positive findings were noted regarding economic well-being (e.g., families transitioning off of aid, stable unemployment rates), by 2010 the impact of the poor economy has likely caused these findings to become reversed.

CHILDREN'S COUNCIL ADVERSE CHILDHOOD EXPERIENCES (ACE) SURVEY

In recognizing how Adverse Childhood Experiences (ACE)[209] has become increasingly more significant because of its bearing on personal, family, and community health and well-being, the Lake County Children's Council supported a study of the relationship between multiple categories of childhood trauma (ACEs) and health and behavioral

[208] Update to the Lake County Children's Report Card, 2007. Lake County Department of Social Services. Accessed at http://www.co.lake.ca.us/Assets/Social+Services/Lake+County+Children$!27s+Report+Card+2007+Update.pdf.
[209] http://www.acestudy.org. Accessed 8/5/10.

outcomes later in life.[210] Adult respondents were asked if they had experienced 10 ACE categories prior to their 18th birthday. While the distribution of the ethnicity/race of the respondents was very similar to that of the county as a whole, the survey included a disproportionately higher number of females and respondents age 18-29, and a lower number of seniors. The findings are based on 326 written surveys (66% of the total, which included Spanish) and 169 online responses (34%). Two percent of the respondents completed the survey in Spanish. Key findings include the following:

Behavioral Health Issues:

- Both men and women indicated they had had difficulty as an adult with their use of tobacco, alcohol, street drugs and prescription drugs.
- A higher percentage of men who responded to the survey had difficulty with quitting tobacco use, overuse of alcohol, and street drug use, while a higher percentage of women had difficulty with overuse of prescription drugs.
- A higher percentage of women indicated they had had difficulty as an adult with being overweight and lacking sufficient exercise.
- Both men and women had difficulty with managing their anger at about the same percentage (about 15%).

ACE-Specific Findings:

Table 69 below shows the percentage of respondents who experienced each of the ACE categories.

Table 69. Percent of Lake County Respondents Indicating They had Experienced ACE Categories

ACE Category	Total	Male	Female
Emotional Abuse	48%	33%	53%
Physical Abuse	41%	30%	45%
Sexual Abuse	35%	7%	44%
Lack of Affection	41%	25%	46%
Neglect	24%	6%	29%
Abandonment	52%	43%	53%
Domestic Violence	27%	18%	28%
Alcohol or Drugs in the home	53%	39%	56%
Mental health issues	36%	24%	41%
Imprisonment	19%	12%	19%

Source: Ferron & Associates. *Report on Results of Lake County Survey of Adverse Childhood Experiences*, July 2010.

[210] Ferron & Associates. *Report on Results of Lake County Survey of Adverse Childhood Experiences, July 2010.* Sponsored by Lake County Children's Council.

Overall, the survey results indicated that as respondents reported they had experienced more of the ACE categories, the percentage of these respondents who had experienced negative behaviors or mental health issues increased (Table 70).

Table 70. Percent of Lake County Respondents with Specific Behavioral Issues Indicating ACE Category Experience, by ACE Score

Mental and Behavioral Health	ACE Score					
	0 ACE	1 ACE	2 ACE	3 ACE	4 ACE	5 or more ACE
Depression	39%	26%	26%	63%	80%	64%
Being Overweight	44%	47%	47%	59%	64%	56%
Lack of Sufficient Exercise	39%	44%	44%	53%	68%	69%
Difficulty with Anger Management	8%	3%	3%	9%	32%	31%
Difficulty Quitting Tobacco Use	30%	21%	21%	34%	24%	47%
Overuse of Alcohol	18%	12%	12%	34%	28%	44%
Street Drug Use	21%	24%	24%	25%	28%	51%
Overuse Prescription Drugs	6%	9%	9%	3%	16%	27%

Source: Ferron & Associates. *Report on Results of Lake County Survey of Adverse Childhood Experiences*, July 2010.

A summary of the study results,[211] with implications for this community health needs assessment, indicated that in Lake County:

- A high percentage of adults (82%) have experienced one or more of the ACE categories included in the survey. In addition, a significant percentage (41%) has experienced five or more ACE categories.
- A high percentage of adults, both men and women, have experienced, or are currently experiencing, depression, weight issues, and lack of sufficient exercise.
- A high percentage of adults have experienced or are currently experiencing difficulty with quitting their use of tobacco, especially men, but also women.
- A high percentage of adults have had or are currently experiencing difficulty with overuse of alcohol, street drug use and overuse of prescription drugs.
- There is a relationship between negative adult behaviors and a high number of adverse childhood experiences (ACE), and this is present for a broad spectrum of residents.

According to local organizations, the report confirms that health practitioners should be more sensitive to adverse childhood experiences and move to ensure they elicit from their clients these experiences, validate them, and move forward with treatment only

[211] Ibid.

after such validation and support to heal has been achieved. This would be true especially for clients demonstrating 4 or more markers.[212]

PROJECTIONS CONCERNING PRISONER REENTRY

Concerned about the impact of parolee reentry into the community and the significant numbers for California, The California Endowment (TCE) commissioned a RAND study, *Understanding the Public Health Implications of Prisoner Reentry in California*.[213] The study provides a way for the California Department of Corrections to address the related public health challenges at the county level, a better understanding of the health care needs of the former inmates and the capacity of the health care safety net in the communities to which they return. Specifically, the report examines the health, mental health and substance abuse needs of ex-prisoners in California and the subsequent impact of their needs. It focused on four California counties (Alameda, Kern, Los Angeles and San Diego) that account for approximately one-third of the parolees.

Although no actual data were provided in the report for Lake County, using zip code analysis the study estimated *the rate of parolees returning to Lake County is increasing relative to the average rate in California counties*. The Department of Corrections cannot tell counties how many ex-prisoners to anticipate returning to the county until it determines who qualifies for release under the new regulations, making it difficult for counties to anticipate needed services.[214] This study is included in this needs assessment report because of counties' growing concerns (and some counties' experiences) where the Department of Corrections—having exhausted all other community placement options—has "dumped" inmates with significant mental health, health, or other treatment needs into a community. The report outlined several findings for counties to consider that will likely impact local providers:

- Chronic Disease: California prison inmates bear a high burden of chronic diseases, such as hypertension and asthma, and infectious diseases, such as hepatitis and tuberculosis, yet a substantial share does not report having seen a physician since their admission to prison. The share is even greater among Latino prisoners.
- Substance Abuse: About two-thirds of California inmates reported having a drug abuse or dependence problem; only 22% reported receiving treatment since admission to prison.
- Mental Health: More than half of California inmates reported a recent mental health problem, with about half of prisoners reporting a mental health concern receiving treatment in prison.
- Access to care: Parolees in rural counties tend to be more dispersed, and African-American and Latino parolees tend to return to disadvantaged communities. This suggests that reentry will be even more challenging in that the constellation of

[212] Personal communication with Tom Jordan, Executive Director, First 5 Lake County. 8/2/10.
[213] Davis, Lois M. et. al, Understanding the Public Health Implications of Prisoner Reentry in California, Phase 1 Report. Prepared for the California Endowment by RAND. 2009.
[214] Personal communication with Kristy Kelly, Lake County Mental Health Director, March 22, 1010.

parolees' needs for health care, housing, employment and other services will be harder to meet.

NON-EMERGENCY MEDICAL TRANSPORTATION

Non-emergency medical transportation was documented as a need through the 2008 *Lake County Coordinated Public Transit-Human Services Coordination Plan*[215] process and has been an ongoing issue in the County's unmet transit needs hearing process. In spring 2010, the Lake County/City Area Planning Council contracted with AMMA Transit Planning of Riverside, California, and a team of partners, to conduct a deeper needs assessment for non-emergency medical transportation and develop feasible solutions responding to the identified needs.

In early summer, a mail-back survey was distributed to 33,500 households in Lake County; it obtained a 3% return rate (1,050 households, representing 1,890 individuals). Of all respondents, 48% were age 65 and older. Among various questions asked, one was requesting information about missed medical appointments by household members over the past 6 months. Sixty percent reported not missing any medical appointments. *Twelve percent of respondents indicated they missed an appointment due to lack of transportation,* the most frequently cited reason for missing appointments. Further detail on needs is still being developed through the survey analysis.

Recommendations presented in the form of a Plan are expected to be directed to various audiences. The draft Plan is expected to be available by December 2010 with an adopted Plan anticipated for spring 2011.

POTENTIAL IMPACT FROM CHANGES IN OTHER COUNTIES

Sonoma County is shutting its HIV/AIDS clinic in summer 2010, and as a result an estimated 700 patients will be searching for care elsewhere. Some of those patients are anticipated to come to Lake County for treatment. Although Lakeside Clinic has been able to maintain its HIV clinic, HIV specialist are only on site 4 days a month (routine care for HIV/AIDS patients is available during normal clinic hours through Lakeside's primary care providers and HIV/AIDS case managers with phone consultation to the HIV/AIDS specialists available when they are not on site). If there is a migration of patients from Sonoma County, Lake County's capacity to treat them could be easily overwhelmed. This is a potential unmet need, and certainly represents a fragile part of the system.

[215] Lake County Coordinated Public Transit–Human Services Transportation Plan. Prepared by Nelson/Nygaard Consulting Associates. September 2008. http://www.dot.ca.gov/hq/MassTrans/Docs-Pdfs/CoordinatedPlng/LAKE.pdf.

Section V. Local Perspectives about Needs and Solutions

"My daughter likes the teen activities at our church because she knows they will be clean. She doesn't like the school dances because of the drugs."—Focus group participant

"The schools are a place where people learn many of their health habits—for better or worse."
—Key informant interviewee

Communities have much strength on which to build community health. These include strong family ties and social networks, trust and respect among community members, organizations with community roots, and health-promoting traditions such as high fruit and vegetable diets and exercise.[216] A number of these strengths, or assets, were recognized by the community members who participated in this needs assessment. They also identified the health problems of greatest concern, and the community health elements of highest priority and most relevance to them.

INPUT FROM THE COMMUNITY SURVEY

Description of Respondents

The Healthy Lake County Survey was distributed online and in various community locations throughout Lake County in an attempt to gain a better understanding of the health needs of those who live in Lake County. Examples of sites that hosted the questionnaire—which included placements intended to reach higher-risk populations—were branches of public libraries, Yuba College coffee shop, senior centers in Middletown and Clearlake Oaks, Lakeport movie theaters, various casinos, health, mental health, and alcohol and drug clients at service sites, and a restaurant in Hidden Valley Lake. Overall, 869 surveys were completed, 37% online and 63% on paper. Of the 15 surveys returned in Spanish, all were completed in hard copy (Table 71).

[216] *Good Health Counts: A 21st Century Approach to Health and Community for California.* Prevention Institute. November 2007.

Table 71. Type of Survey Completed, by Language (n=869)

	Type of Survey				
Language	Paper		Online		Total
	n	Percent	*n*	Percent	
English	531	62%	323	38%	854
Spanish	15	100%	0	0%	15
Total	546	63%	323	37%	869

The survey respondents were approximately two-thirds female, and three-quarters identified as White. Adults aged 25-64 represented two-thirds (67%) of the sample, and seniors (age 65+) represented nearly 20%; youth made up 7% of the respondents. To understand if the survey sample was representative of the Lake County population, selected demographics from the survey were compared to the U.S. Census information for Lake County. The survey is generally reflective of Lake County residents except for the following variables: women and Native Americans were over-sampled (as expected) by about 11% and 50%, respectively, and Latinos and those who speak a language other than English were under-sampled (not expected), both by 8%.

Table 72. Characteristics of the Community Survey Respondents (n=869)

Characteristic	Respondents	
Gender	*n*	Percent
Female	541	62%
Male	259	30%
Missing	69	8%
Total	869	
Ethnicity	*n*	Percent
White	656	75%
Hispanic/Latino	66	8%
Native American	60	7%
Asian	12	1%
African American	10	1%
Mixed	3	<1%
Other	30	3%
American	4	<1%
Hawaiian	1	<1%
Mexican	1	<1%
Puerto Rican	1	<1%
Unspecified	23	3%

Table continues on next page

Characteristic	Respondents	Characteristic
Missing	66	8%
Total	869	
Age	*n*	Percent
18-24	59	7%
25-39	188	22%
40-64	390	45%
65+	165	19%
Missing	67	8%
Total	869	

More than half (55%) of the respondents reported having lived in Lake County for more than 10 years, and three-quarters (76%) for up to 30 years; 5% have lived in the county more than 41 years (Table 73).

Table 73. Length of Time Living in Lake County (n=869)

Length of Time in Lake County	Responses	
	n	Percent
Less than 2 years	57	6%
3-5 years	100	12%
6-10 years	168	19%
11-20 years	153	18%
21-30 years	179	21%
31-40 years	97	11%
41-50 years	24	3%
51-60 years	16	2%
61-70 years	4	<1%
Missing	71	8%
Total Respondents	869	100%

As commonly included in community health needs assessments, respondents were asked to rate their own health status. As Table 74 on the following page shows, two-thirds (68%) of those who completed the survey described their health as "excellent" or "good." This finding is somewhat consistent with the California Health Interview Survey (CHIS) for Lake County, although in the CHIS survey 81% considered themselves in good-to-excellent health. Lake County residents may have reported slightly better health status to CHIS interviewers because that surveys includes a third "favorable" category of "very good," and it is conducted in a telephone interview.

Table 74. Self-Reported Health Status, Community Survey (n=869)

Health Characteristics	*n*	Percent
Excellent	152	17%
Good	441	51%
Fair	172	20%
Poor	38	4%
Missing	66	8%
Total	869	100%

To understand how different populations accessed the paper and online survey, the data were reviewed by length of time living in the Lake County, race/ethnicity, and age group and showed:

- There were very few differences between the online and paper survey response rate for length of time in the county (all differences were less than 3%).
- For their proportion in the sample, respondents who identified as being Native American and Latino were slightly less likely to complete the online survey than White respondents (4%-5% difference).
- Adults 40-64 years of age were more likely to complete the online survey (18%), whereas youth 18-24 and adults 25-39 were 6% less likely to do so and seniors were 12% less likely.

Perceived Positive Health Effects of Living in Lake County

Survey respondents were asked "What about living in Lake County contributes to people's health and well-being in a positive way?" The most common response by far (54%) was "clean air/no pollution," followed by "the beautiful environment/lake/ landscape" and "slower pace/small town/country living" by about 20% each (Table 75).

Table 75. Perceived Health Attributes of Lake County (n=869)

Health Attributes of Lake County	All Respondents	
	n	%
Clean air/no pollution	468	54%
Beautiful environment/lake/landscape	177	20%
Slower pace/small town/country living	161	19%
Outdoor activities/opportunities to exercise	74	9%
Friendly people/sense of community	42	5%

Table continues on next page

Health Attributes of Lake County (cont.)	All Respondents	
	n	%
Community resources	35	4%
Lack of traffic	33	4%
Weather	24	3%
Health care resources	19	2%
“Nothing about this county is positive”/don't know	13	1%
Local food/fresh produce/good wine	8	1%
Safety	6	1%
Jobs	5	1%
No industry	5	1%
I just like living here	2	<1%
Cost of living	2	<1%
Missing	85	10%
Total Respondents	869	100%

Health Habits

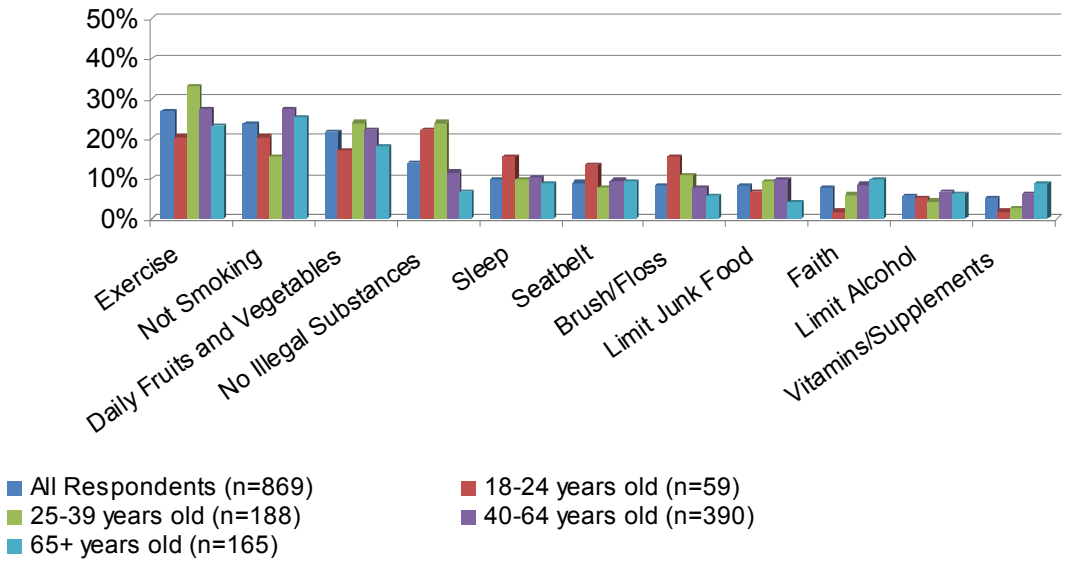
Respondents were asked to choose two health habits that most contributed to their own health. Many respondents checked only 2 responses and others checked up to 12. The ideas were prioritized in the same way regardless of the response method, and the responses from those who checked 2 responses were used for analysis. Exercise, not smoking, and eating fruits and vegetables were viewed by approximately one-third of the individuals as the most valuable health habit (Table 76 on the next page).

Table 76. Health Habits that Contribute Most to Maintaining Personal Health (n=869)

Health Habits	Responses	
	n	Percent
Doing some form of exercise (e.g., walking)	232	27%
Not smoking	207	24%
Eating fresh fruit and vegetables each day	187	22%
Not using illegal substances	120	14%
Sleeping at least 7 hours each night	86	10%
Wearing a seatbelt	78	9%
Brushing/flossing teeth daily	72	8%
Rarely eating fast or "junk" food	70	8%
Practicing my faith/attending services	65	7%
Limiting alcohol (e.g., 1 drink/day) or not drinking	49	6%
Taking vitamin pills or supplements daily	44	5%
Applying sunscreen when outside	10	1%
Other	71	8%
Socializing with Family and Friends	10	1%
Positive Attitude/Humor	10	1%
Other Diet Habits	9	1%
"All of the above are important"	7	1%
Art/Hobbies/Reading	5	1%
Reduce Stress/Avoid Negative Situations and People	5	1%
Breathing/Meditating	5	1%
Community Participation/volunteering	4	<1%
Regular Health Care	4	<1%
Being Outdoors	3	<1%
Working	3	<1%
Education	2	<1%
Good Balance/Self-Care	2	<1%
Marijuana	2	<1%
Great genes	1	<1%
Pets	1	<1%
limiting TV and computer use	1	<1%
Respondents who marked more than two responses	224	26%
Missing	14	2%
Total respondents	869	

To understand how health habits varied across populations, the results were analyzed by age groups. All of the age groups ranked exercise in the top 3 most important health habits. Youth, adults 40-64, and seniors agreed that not smoking was key to maintaining optimum health. Eating fruits and vegetables was prioritized by adults 25-64 and seniors. Youth and adults 25-39 tended most frequently to note the importance of not using illegal substances (Figure 26).

Figure 26. Health Habits by Age Group



Perceived Negative Health Effects of Living in Lake County

Respondents were also asked how living in Lake County might contribute in a negative way to residents' health. By a clear majority, drugs/alcohol was the most frequently cited concerns, followed by economic indicators such as poverty and lack of jobs, and access to health care resources (Table 77 on the next page).

Table 77. Health Detriments of Lake County (n=869)

Health Detriments	Responses	
	n	Percent
Drugs/Alcohol	249	29%
Poverty/Economy/Lack of Jobs/Low Wages	155	18%
Access to Health Care Resources	113	13%
Lack of Community Activities/Entertainment	56	6%
Lifestyles/Lack of Self Care	56	6%
Pollution/Trash	56	6%
Streets and Driving Safety/Too much Traffic	51	6%
Driving Distances/Transportation	47	5%
Safety/Pedophiles	42	5%
Lack of Resources/Conveniences/Shopping	28	3%
Nothing/Don't Know	27	3%
Isolation/Rural	22	3%
Ignorance, Lack of Education	21	2%
Lack of Healthy Foods/Poor Nutrition	18	2%
Law Enforcement/Judicial System	17	2%
Negative Attitudes	16	2%
Pollen/Allergens/Allergies	12	1%
Smoking	12	1%
Local Government	9	1%
Development/Growth/Tourists	8	1%
No Sidewalks	8	1%
Obesity	8	1%
Prices	7	1%
Housing	6	1%
Pesticides	6	1%
Upkeep of Community Buildings (homes and businesses)	6	1%
Everything	4	<1%
Mental Health Issues	4	<1%
Weather	4	<1%
Gambling/Casinos	3	<1%
Illness/Trauma	3	<1%
Lack of Diversity	3	<1%
Missing	98	11%
Total Respondents	869	100%

Identified Health Needs/Problems

To determine the community's perspectives about health priorities, respondents were asked to identify the 3 most important health needs for people in Lake County. The identified needs were categorized into 8 main topics for analysis; the subcategories provide examples of the types of needs described. Although there is a certain amount

of overlap among some of the categories, it was beneficial to segregate these items to show specificity and detail. The majority (61%) of respondents identified the need for more direct health services, especially accessible and affordable medical care, dental services, and access to insurance (Table 78). Other frequently reported needs included nutrition and weight management (30%), alcohol and drug-related services (23%), and the need for people to exercise more (22%).

Table 78. Top Health Needs/Problems in Lake County* (n=869)

Health Need/Problem	Respondents	
	n	Percent
Health Services/Medical Care	**530**	**61%**
Accessible and affordable medical care (primarily insurance coverage)	264	30%
Dental services (especially for adults/seniors)	151	17%
Health and dental insurance	124	14%
Mental health services (especially non urgent)	85	10%
Higher quality health services and facilities	77	9%
Wellness programs/health education/preventive screenings	71	8%
More medical specialty services available locally	51	6%
Quality in-home support services and elder support	43	5%
Affordable prescriptions	28	3%
Vision-related needs	21	2%
Emergency treatment/trauma center (improved ED care; access to local trauma services)	15	2%
Alternative health care methods	9	1%
24-hour access to medical care (MDs on call, 24-hour clinic, urgent care)	8	1%
Hearing	3	0%
Nutrition and Weight	**257**	**30%**
Better nutrition/access to affordable healthy food	184	21%
Weight management/obesity	88	10%
Alcohol/drug/tobacco	**202**	**23%**
Alcohol and drug /addiction	172	20%
Smoking	57	7%
Marijuana (access to medicinal marijuana)	3	0%
Activities and Exercise	**187**	**22%**
Exercise	155	18%
Affordable and accessible activities	37	4%
Sidewalks/bike lanes/walking paths	11	1%

Table continues on next page

* Note: the sample size (n) for the bolded category headings is the number of respondents who had at least one response in the category. Respondents may have indicated more than one need in the category. The percentages of the subcategories are based on the total number of survey respondents (n=869), and do not add up to the main category percentage due to multiple responses with a category.

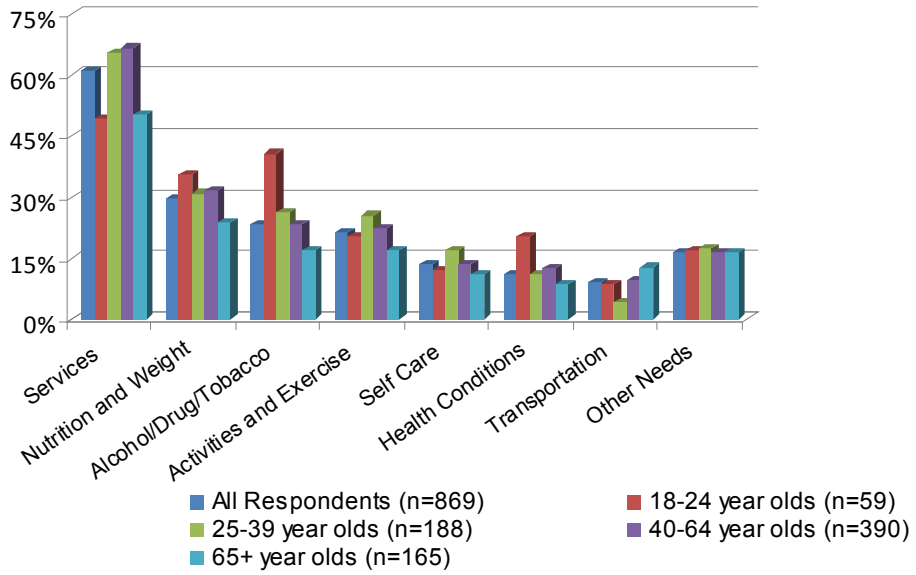
Health Need/Problem	Respondents	
	n	Percent
Self Care	**117**	**13%**
Lifestyle/self care	44	5%
Social supports	29	3%
Stress and depression	29	3%
Negative attitude/lack of motivation	10	1%
Sleep	10	1%
Faith	6	1%
Health Conditions	**97**	**11%**
Other health conditions (e.g., asthma, high cholesterol)	41	5%
Diabetes	39	4%
Heart-related problems	38	4%
Cancer	32	4%
Depression	6	1%
Transportation	**80**	**9%**
Transportation	80	9%
Other Needs	**143**	**16%**
Money/economy/low income	41	5%
Clean environment (air, water)	29	3%
Employment	19	2%
Safety	19	2%
Housing	9	1%
Other	59	7%
Missing	101	12%
Total respondents	869	

Identified Health Needs by Groups

The data were analyzed to see how the identified top health needs varied by age group, self-reported health status, the length of time living in Lake County, and whether or not the respondent indicated cost was a barrier to medical and dental care. (See Tables A5.1-3 in Appendices for detailed comparison data.) Youth were less likely to indicate a need for more services and more likely to cite alcohol/drug/tobacco and health conditions[217] (41% vs. 23% for the overall sample). The needs of adults and seniors closely matched the overall reported health needs: health services, nutrition and weight and alcohol/drugs/tobacco. Seniors were the most likely group to indicate a need for transportation (13% vs. 9% for the overall sample).

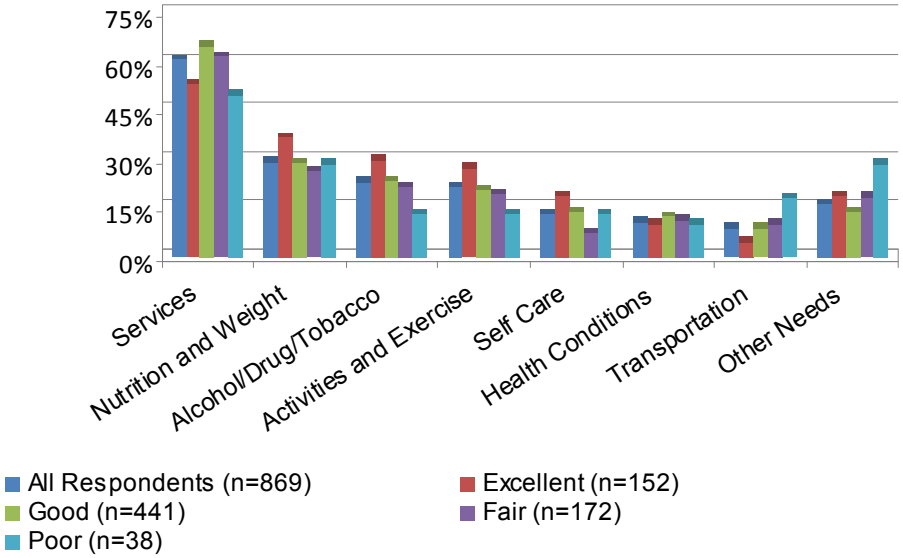
[217] Youth tended to cite sexually transmitted diseases and asthma more frequently than cancer and diabetes.

Figure 27. Identified Health Needs by Age Group



When identified priority health needs were analyzed by self-reported health status, those who indicated being in "poor" health were more likely to cite transportation (18% vs. 9%) and other needs, especially money/low income (13% vs. 5%), as their top concerns than people who reported being healthier (Figure 28). Those who reported their health as excellent were less likely to report a need for health services (53% vs. 61%) and more likely to prioritize nutrition/weight management (37% vs. 30%), alcohol/drugs/tobacco (30% vs. 23%), activities and exercise (28% vs. 22%), and self care (19% vs. 13%) than those with lower-reported health status.

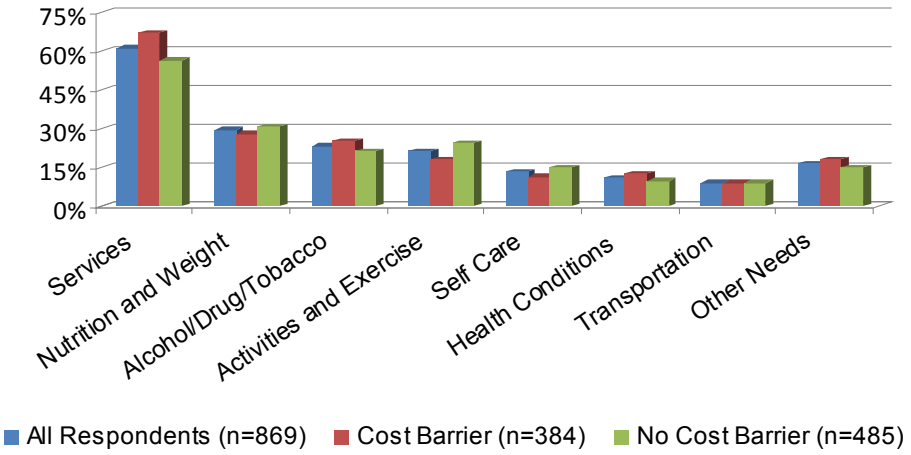
Figure 28. Identified Health Needs by Self-Reported Health Status



When the data was examined to see if there was any difference in the types of health needs identified by people who were relatively new to Lake County (defined as "<8 yrs") and those who have lived here for up to 70 years, the number of years did not have a noticeable effect on the health needs they reported.

Finally, the data was examined to determine what respondents who usually experienced financial access problems suggested as the top-ranked health problems. Not surprisingly, those who reported a cost barrier were more likely to prioritize the need for health services, 67% vs. 61%, particularly dental services, 27% vs. 17% (Figure 29).

Figure 29. Identified Health Needs by Cost Barrier



Access-Related Problems When in Need of Health Care

Respondents were asked to state whether any of a list of common barriers was "usually a problem" when they or their family needed medical/dental care. As shown in Table 79 on the next page, respondents were most likely to report cost, clinic hours, finding a provider to take their insurance, and lost wages as frequent problems when seeking care. (Note that not all respondents answered all of the items.)

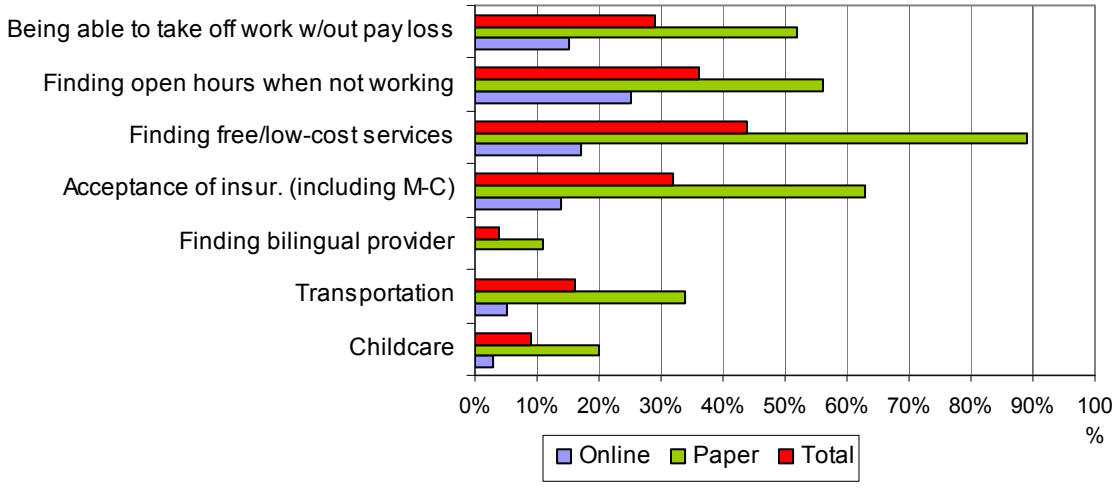
Table 79. Problems Usually Experienced When in Need of Health Care (n=869)

Item	Usually a Barrier?	
	Yes	*No*
Finding somewhere that offers free or reduced-cost services	384 (44%)	346 (40%)
Finding an office or clinic that's open when I'm not working	317 (36%)	389 (45%)
Finding someone who takes my insurance (including Medi-Cal)	282 (32%)	448 (52%)
The ability to take off work when I/my family is sick, without losing pay	251 (29%)	434 (50%)
Transportation	141 (16%)	708 (81%)
Childcare	82 (9%)	601 (69%)
Finding a place where they speak my language	39 (4%)	652 (75%)
Missing	61 (7%)	
Total Respondents	869 (100%)	

Barriers and Type of Survey Completed

All people have health needs, but it is possible that people who use a computer to respond to a survey (e.g., professionals, people with jobs) may report barriers less often as a problem and thus skew the findings. When the data were analyzed by type of survey completed, it was clear those who completed a paper survey experienced more barriers overall than the rest of the respondents (Figure 30). For example, of the 384 respondents who indicated that finding free or low-cost services was a barrier, 89% of those who completed a paper survey indicated that was usually a problem, compared to 17% of those who completed the survey online. (The possibility that some respondents might have answered this question to also include the barrier *finding a Medi-Cal provider*, which was a separate question, may account such a large percentage, however.) In the same way, 34% of the hard-copy respondents, compared to 4% of the online respondents, found transportation to be a frequent barrier when they needed medical or dental services.

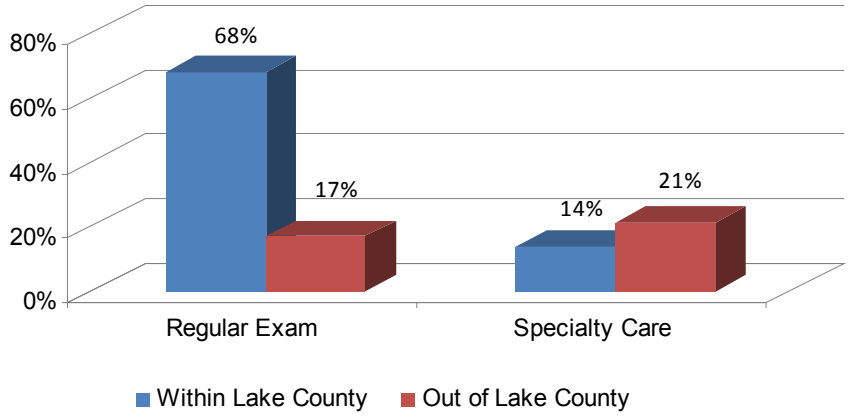
Figure 30. Access Barriers and Type of Survey Completed



Usual Location of Care

Respondents were asked where they last received their regular and specialty care. As shown in Figure 31, the majority of respondents reported receiving their regular care (e.g., examinations, screenings) within Lake County; those who sought specialty care were more likely to leave Lake County to obtain it.

Figure 31. Location of Medical Care n=(869)



Ideas to Help Improve the Health of People in Lake County

Individuals were asked to choose and rank 3 ideas from a list for improving the health of people who live in Lake County (a write-in for "other" was also provided). Although many of the respondents prioritized the ideas as requested, others put a check mark by the category but did not indicate a ranking. Consistent with the identified needs and reported barriers, respondents ranked the need for "more affordable health insurance" as a first priority (Table 80). When combined with the category "more medical care," one-third (34%) of respondents indicated those ideas as the top priority.

Table 80. Prioritized Ideas to Improve Health in Lake County (n=869)

Ideas to Improve Health	First Priority		Second Priority		Third Priority		No Ranking	
	n	%	*n*	%	*n*	%	*n*	%
More affordable health insurance	179	21%	75	9%	57	7%	69	8%
More affordable medical care	112	13%	92	11%	82	9%	51	6%
More year-round activities for youth	101	12%	86	10%	112	13%	51	6%
More access to affordable wellness type centers and services	80	9%	87	10%	79	9%	56	6%

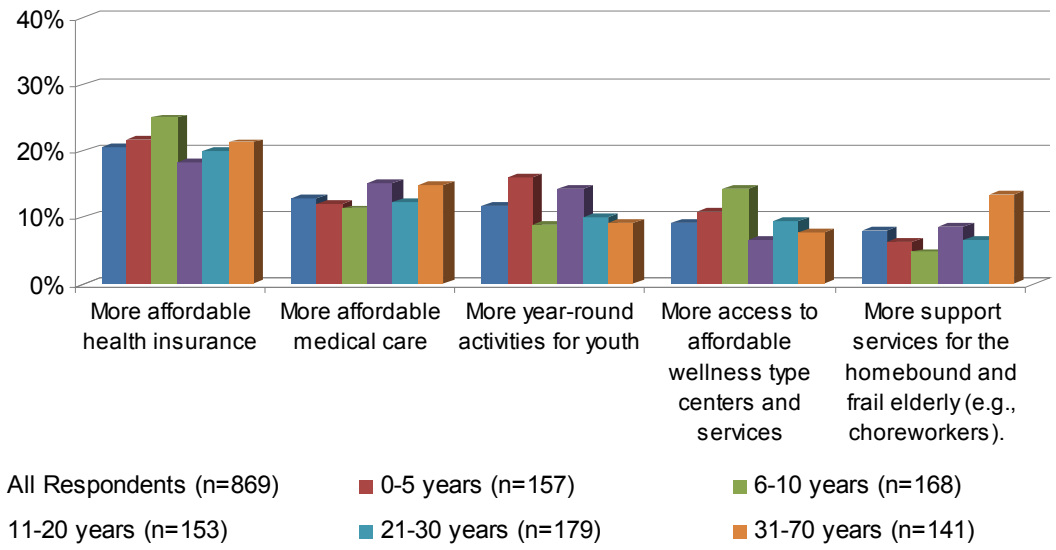
Table continues on next page

More support services for the homebound and frail elderly (e.g., chore workers).	70	8%	57	7%	76	9%	57	7%
More low-cost mental health/counseling services	47	5%	72	8%	54	6%	37	4%
More affordable dental care	44	5%	117	13%	92	11%	64	7%
More efforts to have a cleaner environment (air, water….)	27	3%	33	4%	29	3%	34	4%
Improved public transportation options	22	3%	59	7%	65	7%	38	4%
Other	12	1%	7	1%	11	1%	69	8%
Shopping Centers	*1*	*0%*	*0*	*0%*	*0*	*0%*	*1*	*0%*
Activities for All Ages (Exercise, Sports, etc)	*3*	*0%*	*1*	*0%*	*3*	*0%*	*10*	*1%*
Health Education	*1*	*0%*	*2*	*0%*	*2*	*0%*	*7*	*1%*
Personal Responsibility for Health/Self-Care	*0*	*0%*	*2*	*0%*	*1*	*0%*	*6*	*1%*
Employment/Education/Economic Security	*0*	*0%*	*0*	*0%*	*1*	*0%*	*7*	*1%*
Substance Abuse Prevention, Screening and Treatment	*1*	*0%*	*1*	*0%*	*0*	*0%*	*12*	*1%*
More Qualified Medical Providers	*0*	*0%*	*0*	*0%*	*0*	*0%*	*2*	*0%*
More Qualified In Home Support Workers	*0*	*0%*	*0*	*0%*	*0*	*0%*	*2*	*0%*
Improve access and Affordability of Health Care/ Specialists/ Emergency Services	*2*	*0%*	*1*	*0%*	*2*	*0%*	*4*	*0%*
Eye Care	*1*	*0%*	*0*	*0%*	*1*	*0%*	*1*	*0%*
Housing	*1*	*0%*	*0*	*0%*	*0*	*0%*	*2*	*0%*
Access to Food	*1*	*0%*	*0*	*0%*	*0*	*0%*	*5*	*1%*
Improve transportation options	*0*	*0%*	*0*	*0%*	*0*	*0%*	*3*	*0%*
Fix Roads	*0*	*0%*	*0*	*0%*	*0*	*0%*	*1*	*0%*
Homeless Shelter	*1*	*0%*	*0*	*0%*	*0*	*0%*	*1*	*0%*
Marijuana	*0*	*0%*	*0*	*0%*	*0*	*0%*	*2*	*0%*
Clean Drinking Water	*0*	*0%*	*0*	*0%*	*1*	*0%*	*0*	*0%*
Access to Mental health Services	*0*	*0%*	*0*	*0%*	*0*	*0%*	*1*	*0%*
All of these	*0*	*0%*	*0*	*0%*	*0*	*0%*	*1*	*0%*
None of these	*0*	*0%*	*0*	*0%*	*0*	*0%*	*1*	*0%*
Missing							34	4%

To further understand the ideas ranked for improving health, the data was reviewed to see if the number of years an individual lived in Lake County and the location where individuals received regular and specialty care impacted the ideas they prioritized.

The number of individuals prioritizing more support services for the homebound and frail elderly was higher for respondents living in Lake County for 31-70 years (these might have been older respondents). Those living in Lake County for 6-10 years showed more interest in wellness centers and providing people with affordable health insurance. There was less than 5% difference in all other variables. The top 5 ideas for improving health are shown in Figure 32.

Figure 32. Top 5 Ideas to Improve Health in Lake County, by Length of Time in County



When the data were reviewed based on where the respondent has last received medical care, one variation was found. Individuals who received specialty care out of the county were more likely to prioritize more affordable health insurance than individuals who received their specialty care in Lake County (25% vs. 19%). There was less than 5% difference in all other variables.

COMMUNITY FOCUS GROUPS

Characteristics of the Sample

A total of 126 individuals attended one of the 6 community focus groups. (The numbering of the groups in Table 81 relates to the findings presented in subsequent tables.) While no one group was expected to be representative of Lake County, *in the aggregate* the groups reflected a diversity of residents, particularly those with needs addressed by community needs assessments.[218] The focus groups generally drew participants from throughout the county. The majority was English-speaking, and overall women and men were mostly represented in equal numbers. While the participants were typically 30-55 years of age, two groups also had a mixture of seniors and one comprised mostly of young adults. The focus groups were held at a variety of host organizations.

Table 81. Lake County Community Focus Group Characteristics

City/Site		Characteristics	Primary Language	Participants
1	Sutter Lakeside Hospital Wellness Center	Mostly White; mostly adults; about half male	English	11
2	Lake Family Resource Center, Lakeport	Mixed race/ethnicity; mixed age group; about one-third male	English	19
3	Redwood Children's Services, Clearlake	Mostly White; mixed age group; mostly female	English	6
4	Lakeport Senior Center	Mostly White; adults and seniors; equal gender	English	35
5	Tribal Health Women's Wellness Group	Mostly Native American; mixed age group; all women	English	20
6	Migrant Parent Advisory Committee, Kelseyville	Mostly Latino; mostly adult but several youth; equal gender	Spanish	35
Total				126

Most-Commonly Identified Health Needs/Problems

Table 82 on the next page displays the unmet/under-met health needs or problems focus group participants identified as being "most important to people in Lake County."

[218] As discussed earlier, these findings represent the experiences and perceptions of the people who attended a focus group; their opinions were requested to get a read on what they thought about a variety of issues, and by itself do not represent the whole picture.

The participants were asked to identify *needs* with the understanding that not all health *problems* have unmet needs associated with them. They were encouraged to think of health in broad terms and not as "medical" needs only. Participants were not asked to prioritize or rank the needs once they were identified. It will be clear from these data that although the facilitator did not limit the participants in identifying needs, but attempted to draw them out and occasionally prompt them with additional questions, some groups chose to focus on fewer needs and issues than other groups. While the participants were asked to think broadly about all Lake County residents, it was common for people to focus predominantly on needs and issues most familiar to them or typical of their own neighborhoods and age groups.

Table 82. Health Needs/Problems Identified by Focus Group Participants

The need for….	Focus Group #					
	1	2	3	4	5	6
Access to affordable health services (including more specialists)	X	X	X		X	X
Drug and alcohol addiction/recovery services; enforcement of AOD laws		X	X	X	X	
Prevention education/intervention to "eat better" (including school lunches)	X	X		X	X	
Dental services, especially for adults/seniors		X	X			X
Transportation to appointments		X		X	X	
Reduced waiting time for appointments (to get appointment; long wait during visit)	X	X	X			
Affordable in-home support services/elder care (including need for respite)	X	X		X		
Mental health issues (e.g., stress, depression)	X				X	
More access to birth control services (including sex education in school)		X			X	
Consistent providers (e.g., "doctors that stay long-term")	X			X		
A homeless shelter in the county			X		X	
Urgent care (vs. emergency dept) services; a trauma center in the county		X			X	
Improvement in quality at hospital (cleanliness; courtesy of staff)					X	
After-school programs						X

X = the item was cited by the focus group. A blank space indicates the need or issue was not mentioned.

Focus Group Key:

1 Sutter Lakeside Hospital Wellness Center
2 Lake Family Resource Center, Lakeport
3 Redwood Children's Services, Clearlake
4 Lakeport Senior Center
5 Tribal Health Women's Wellness Group
6 Migrant Parent Advisory Committee, Kelseyville

Access to Medical Care

Factors associated with access to medical care—due mostly to financial reasons, but including non-financial as well—were the most frequently-cited health needs. Of note, the only group in which these issues were not raised was the mostly adults/seniors who attended the Senior Center meeting. Examples of access included not enough providers who accepted Medi-Cal (interestingly, no reference was made to availability of the community clinics), not having insurance (ever or recently losing employment-based

insurance due to job loss), not having affordable copayments, and not being able to find a specialist locally—either because they don't exist or don't accept Medi-Cal.

Other access issues mentioned were waiting too long to *get* an appointment, waiting too long *during* an appointment (a big concern for many), particularly emergency departments ("my son needed stitches on his foot and we were there for 8 hours; a child—or anyone—shouldn't have to wait that long"), needing more specialists (i.e., due to geographical maldistribution, to take care of the higher numbers of seniors in Lake County, to avoid having to go out of county for care). The need for more orthopedic surgeons (e.g., "to take care of fractures from vehicle crashes"), psychiatrists, and neurologists were given as examples. Dialysis resources were specifically mentioned by the Native American group in recognition that "there is a lot of diabetes, especially Native Americans."

The quality of health care was addressed by several groups in the context of identifying various needs. Having access to "good" doctors was a common theme. For example, while one individual believed "they send us the reject doctors" another responded "there are awesome doctors here; it's a word-of-mouth thing, and you just have to know which ones to go to." The perceived lack of cleanliness in one of the hospitals was raised by one of the groups, which also mentioned believing the nursing care was not up to par.

Two of the groups talked about the lack of continuity of providers. Several of the attendees had complicated health needs and were frustrated with having to change doctors frequently due to providers leaving the area. A few of the attendees had long-term doctors that they were happy with and the others looked at them with envy. One discussion addressed the difficulty of trying to become an established patient of a physician when there was no insurance coverage.

Substance Abuse

The need for more services related to alcohol and drug use—prevention education, recovery services, and enforcement (e.g., "pervasive" drug use/drug producing and selling)—were identified by participants across the age spectrum. Alcohol abuse, particularly by youth (e.g., binge drinking) was referenced a far distant second to concerns about marijuana and other illegal substances. The impact of drug abuse on the community was described as a priority health concern. A number of participants across the groups thought law enforcement was not vigilant enough in addressing the problem ("my God, I have the biggest drug dealer in the county living next door to me and no one seems to care").

Preventive Health Lifestyle and Healthy Eating

"Eating right" and "eating good food" was the common theme among those who identified the need for people to take better care of themselves—to focus more on prevention. Many participants felt that families and individuals were not eating healthy, nutritious food—some attendees citing the current economic recession as the reason; others citing "crummy school menus." Childhood and adult obesity from improper

nutrition and lack of adequate physical activity was a commonly-mentioned problem. Of particular mention was diabetes, especially relevant for the Latino and Native American community and seniors.

While issues of prevention education and activities were generally referred to in the context of healthy eating, having access to affordable gyms and wellness-type centers to exercise was identified in 2 of the focus groups. A couple of attendees identified the need for "safer places [relative to sidewalks, not threat of assaults] to walk/bicycle." Relative to those who are inactive (e.g., the elderly, youth) one individual observed that "people are scared and intimidated to start," and suggested the need for more outreach and support. Preventive medicine/natural remedies were referred to as a need within some of the discussions about improving healthy behaviors.

Access to Dental Services

Participants in 3 of the 6 groups identified the need for more affordable dental care but did not offer very many examples of problems, for example postponing or foregoing treatment because of cost. It was noted that many of the services were limited in scope (no Medi-Cal coverage for orthodontia), eligibility (e.g., Medi-Cal/other only for children), and provider supply (too few Denti-Cal providers). Interestingly, the availability of dental care through community clinics was not mentioned.

Transportation

Transportation (mostly in the context of getting to medical appointments) was identified as a need in 3 of the focus groups most reflective of the age/gender/race-ethnicity diversity of participants, suggesting the extent to which it is a cross-cutting problem. The need for transportation to supportive-type services (mental health counseling, senior center activities) was also addressed in these groups.

Urgent/Emergency Services

The need for more in-county emergency services, including having an in-county trauma center, was identified by 2 focus groups, a seemingly low number considering the input about this topic in the Consumer Questionnaire (see earlier discussion in this section of the report). Some of the discussion centered on the need to have better access to urgent care ("doc in the box") resources when hospital emergency department (ED) services weren't required. The quality of the treatment in the ED (not specified where) was believed by a number of participants to be poor—although some may have been referring to lengthy waiting times to be seen. Dissatisfaction with having to be airlifted for care out-of-county was not addressed in any of these groups.

Family Planning Services

Two of the groups (Lakeport FRC and Tribal Health) identified the need for more access to "birth control"—including sex education in the schools—and gave as an example the necessity for more Planned Parenthood sites and hours of operation.

Other Identified Needs/Comments

Other general needs and issues brought up during the discussion of high-priority health needs included the following:

- "The waiting times in the clinics are frustrating and people delay care to avoid the waiting."
- "There are just too few drug rehab programs that also deal with mental health issues."
- "You have to be really crazy to get any [mental health] attention around here."
- "[Name of city] is a drop-off for pedophiles. They [the Governor] need to stop sending pedophiles to small towns."

Barriers to Use of Services

While there is an overlap, factors related to the health care system and to individuals' own personal barriers affect the use of health services and adoption of preventive health practices. Functions of the healthcare system such as not enough providers taking Medi-Cal or lack of interpreter services are examples of system or structural barriers. Personal factors that serve as barriers—which tend to be less concrete—include beliefs and attitudes about illness and wellness and fear of economic loss. Both types of barriers put people at risk for not getting the amount, type, quality and timeliness of the services they need.

To identify barriers, focus group participants were asked what "stood in the way" of seeking or obtaining needed services, either for themselves or people they knew.

System Barriers

In addition to the problems with getting appointments and long waits during office visits described above, other system or provider-related barriers that were mentioned or expanded upon included:

- Services not widely available in all parts of the county.
- Not all medical specialties represented or in adequate supply. ("It doesn't seem appropriate that I have to go to San Francisco to find a Medi-Cal provider." "The gas to get there, parking, and bridge tolls are just too expensive.")
- Limited transportation options. ("Programs are not accessible, many people have no car." "The bus is on a schedule and sometimes it takes all day to go to an appointment [in Ukiah] and come back.")
- Lack of hospital beds (real or perceived)/bed closure. ("I was sent home the same day I had surgery and had to go back 3 times for wound care and pain medication because they said there was no bed for me." "I know 2 people who weren't admitted to the hospital because of lack of beds; one was sent home and died that evening,

the other was admitted to a rest home and died the next day." "I was overnight in the hospital after surgery, and I slept on a gurney because they didn't have any beds.")
- Provider insensitivity to type of client, e.g., because of ethnic group, substance user (viewed as perceived prejudice), or disrespect/rudeness.
- "Cumbersome" system. Too much paperwork; difficulties in navigation. ("People like to talk to a real person. Old folks can't figure out all that telephone menu stuff.")

Personal Factors as Barriers

The personal or user-side barriers that were cited by the groups included:

- The cost of care, including prescriptions.
- Lack of knowledge ("people aren't very educated about prevention").
- The inability to get time off from work (fears about job security, economic loss).
- Not having the money to pay for child care as the reason for not seeking care or missing or being late for appointments.
- Fear and anxiety (e.g., going to the dentist).
- Language barriers.
- Denial. Not accepting that there's a problem was brought up in one of the groups.

Things People Do to Keep Themselves Healthy

With an increasing recognition that people have responsibility for controlling their own health—including managing chronic disease—by incorporating effective ways of staying fit, we asked participants what they personally did to keep themselves healthy. To get people to think outside of the "medical norm"—which was generally the initial response—the facilitator prompted with questions such as "What about things you do to stay safe?" "What about other daily habits?" If the group did not address emotional/ mental/spiritual means, she also asked "And, what about maintaining good emotional health?" Table 83 on the next page lists the most common habits people mentioned, generally in order of mention; an "X" in the right-hand column signifies the item was mentioned by at least half of the groups or fewer groups with a very high degree of concurrence (for example when others gave a resounding "yes, that's right," indicating their agreement with the item) and a "Y" means the health habit was mentioned by 1-3 groups.

The most common ways people mentioned for maintaining good personal health were the usual good-health habits: eating right, exercising, and not smoking/abusing alcohol and drugs. The emphasis on "not doing drugs" was a widespread comment. Whenever these health habits were mentioned—and they were identified in every group with no prompting—participants described the difficulty in adopting such lifestyle behaviors because other priorities intervened. People in several of the groups alluded to health not really being a priority for them at this time; their basic needs were for rent and food. Nevertheless, it was clear that focus group members across the board were aware of

the importance of these habits—even if they didn't take the time to put them into practice but were "supposed to."

Table 83. Most Commonly Mentioned Health Habits for Maintaining Own Health

Method	Indication of Importance[1]
Physical	
▪ Walk	X
▪ Ride bicycle; swim	X
▪ Try to eat right/good food ("eat salad every day;" "eat non-hormonal meat;" "watch my sugars")	X Y
▪ Don't do drugs/drink too much/smoke	X
▪ Try to get enough sleep	Y
▪ Join/go to gym	Y
▪ Drink more water	X
▪ Take vitamins	Y
Safety	
▪ Wear seat belt ("I don't drive with my Mom when she's high")	
▪ Home protection ("sleep with a gun under my mattress")	
Mental/Emotional/Spiritual	
▪ Sense of humor ("try to laugh a lot")	X
▪ Pray/meditate/go to church	Y
▪ Get involved in art projects/music	X
▪ Take anger out on other people (i.e., as opposed to self)	Y
▪ Be around people who are positive ("stay away from downers")	X
Other	
▪ Take care of/play with pets	Y
▪ Pay bills on time	Y
▪ Go for regular health screenings/get flu shot	Y
▪ Drink a medicinal tea and cry	Y

[1]X = mentioned by at least half of the groups or fewer groups with a very high degree of concurrence within a group.
Y= the health habit was mentioned by 1-3 of the groups.

There was little variance across the groups in terms of the type of health habits or activities participants engaged in, although younger members tended to address substance abuse behaviors more frequently. The group with predominantly Spanish speakers mentioned health habits similar to those of the other groups.

Three of the groups identified mental/emotional/spiritual activities for staying "fit" but it was with a little prompting by the facilitator. The most frequent comment was having a positive attitude and surrounding oneself with people who aren't "downers." Personal activities such as prayer/ meditation, and music (which might be alone or with others) were also commonly mentioned. The importance of external group involvement, however—time with good friends, volunteering—was only brought up by one group.

Notably, while dental services had earlier been identified as a top need in at least half of the focus groups and received strong concurrence by all of the members, the activity "brushing teeth" as a way of maintaining personal health was not mentioned. This

suggests most people do not understand the importance of oral health to a person's overall general health.

Also of note, while some of the activities described might certainly have included other family members, no one in any group explicitly mentioned "spending time with my family" in reference to an activity (e.g., bicycling), although focus group participants elsewhere generally mention this.

Other ways of maintaining good physical and mental health *not* mentioned that commonly come up in other community focus groups include reading and doing "brain games" such as puzzles. (These are often mentioned by seniors.) Clearly, no one mentioned any "pampering"/time-for-self activities such as getting a manicure or even inexpensive things like taking a warm bath, although these residents may actually do such activities but not identify them as "positive health habits." Or, it is simply that many people are so focused on basic needs because of the stress of the economic times that they could not easily think beyond this.

Recommended Solutions and Other Ideas

Focus group participants were asked to make recommendations for "improving the health of people in the community," including suggestions about the kind of programs or services they would like to see added, expanded, or improved in Lake County. While most recommendations tied back to the identified needs, some did not. Table 84 that begins on this page lists the ideas and recommendations from each focus group that participants believed should be considered by community leaders, policymakers, providers, and others with the monetary as well as non-financial means to make improvements.

Table 84. Recommendations from Focus Groups for Improving Community Health in Lake County

The need for….	Focus Group #					
	1	2	3	4	5	6
Food-related support (community gardens, expanded soup kitchen days, year-round/ indoor farmers' market).	X	Y	Y		Y	
Affordable **exercise *places*** (inexpensive gyms, expansion of Sutter Wellness Center to other locations, community pool).	Y	Y			Y	Y
Promote **community exercise *activities*** (e.g., marathons).	X			Y		
More **affordable health care/insurance** for all (e.g., not just for children).		Y		X		
More **youth activities** (flexible programs; less organized to accommodate drop-ins).		Y		X		
More preventive education/more affordable **alcohol/drug addiction** recovery facilities.		Y			X	
Expand **public transportation** options.			Y		Y	
More/safer **bike lanes** and **sidewalks** (e.g., for wheelchair access).	X	Y				
Access to more/higher-quality **dental care** (including preventive, e.g., free toothbrushes).			Y	Y		
Build more **homeless shelters/transitional housing** places.			Y		Y	

Table continues on next page

The need for….
Additional Ideas/Solutions (mentioned by only one group): ▪ More community-based mental health services ▪ Better accessibility of clinic services (hours of operation, clinics that are just for Medi-Cal) ▪ Hire more Spanish speaking staff (particularly psychologists, e.g., school psychologist) ▪ More health education (prevention, particularly) and information about type/location of available services ▪ Add PE back in/more PE time in schools ▪ Fix up/have more parks ▪ Provide more college scholarships ▪ Provide more/more affordable childcare for working parents ▪ Clean out the lake ▪ Build a new hospital ▪ More affordable/decent housing options ▪ Create more jobs ▪ Offer more health services through the use of mobile vans ▪ Turn the abandoned College Square building into a substance abuse treatment facility.

X = The recommendation was mentioned and appeared to really resonate with the group. Y = The recommendation was mentioned by the group. A blank space indicates the idea was not mentioned.

Focus Group Key:

1 Sutter Lakeside Hospital Wellness Center
2 Lake Family Resource Center, Lakeport
3 Redwood Children's Services, Clearlake
4 Lakeport Senior Center
5 Tribal Health Women's Wellness Group
6 Migrant Parent Advisory Committee, Kelseyville

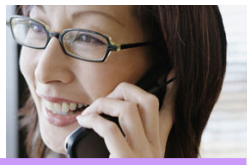
The most commonly-recommended idea for improving community health related to food (mentioned in 5 of the 6 focus groups)—making better food more available in the community such as through indoor farmers' markets (so that it could be year-round), community gardens, and expanded food bank and soup kitchen days/hours of operation. The recommendations were generally expressed more as a *basic need* (i.e., hunger) for food than a focus on "eating right" behaviors such as less sugar and fats and more fresh vegetables.

Support for building new or offering existing places where exercise activities could occur was the second-most frequently mentioned recommendation. The ideas included "an Olympic-size pool for the community," and gyms that were no- or low-cost, especially for seniors. A couple of the focus groups also mentioned promotion of exercise activities that promoted good health but were inexpensive such as organizing races and hikes.

The ideas offered by 2 of 6 groups included more accessible/affordable medical and dental care (consistent with identified needs but less frequently mentioned than would be expected); more mental health services; more youth activities (after-school and community-based programs, particularly with drop-in availability); more substance abuse services; and more housing and shelters for the transitional/homeless.
The only difference between the predominantly Spanish-speaking focus group and the other groups was the recommendation by the former that more personnel with the ability to speak Spanish be hired by clinics and schools.

Other comments of interest include:

- "People are responsible for their own health choices; make education available to everyone and once they have the information they are responsible for their decisions."
- "The cost is too high; I self medicate with other people's medicine."
- "I would give all the money [funders might use to support improvements] to the senior centers so they can get out from under the State and stop having other people telling us what needs to be done."
- "We should be teaching parents to take responsibility for their children and work with rather than against teachers."
- "Everything here [Lake County] is fine just the way it is" [i.e., no improvements needed].
- "I'm not long for this world, so I don't know what to change." [Senior center participant]
- "Wow, if we had everything recommended here [for improving community health], we wouldn't be able to keep people *out* of Lake County—everyone would want to be here!"



KEY INFORMANT INTERVIEWS

Characteristics of the Sample

Fifteen of the 25 (60%) individuals identified as key informants and contacted by email agreed to participate in an interview. (This number of respondents does not include the Collaborative members who volunteered to be interviewed.) Follow up emails and telephone calls were made to non respondents to encourage their participation. (Attachment 3 lists the key informants who completed an interview.) The interviewees generally represented a cross-section of the Lake County health and human service community that in addition to health care professionals from public and community-based organizations included policy makers, advocates, and individuals with an informed perspective about unmet health needs. While most of the interviewees spoke to the issues they knew best from their professional roles, many were also able to consider and describe additional health-related needs when prompted with questions to help them think about geographical, age, gender, race/ethnicity, and other factors that influence community health and access to services.

Unique Characteristics Affecting Health

In every community there are unique factors or characteristics that contribute to health and well being or that threaten good health. The key informants were asked what distinctive characteristics about Lake County play a part in promoting or protecting health or in undermining it. The perceived positive community characteristics they identified are assets that should be maximized in community health improvement efforts. Conversely, the perceived negative characteristics or challenges are important for organizations and advocates to address and work around when they can't be modified or eliminated.

Supportive Factors

The clean air and natural beauty, including plenty of open spaces, of Lake County were widely recognized by key informants as among the most important contributors to positive health and well being (Table 85 on the next page), similar to respondents to the community survey. Examples of why these attributes were health-related included encouraging of exercise (walking, hiking) and other healthful outdoor activities such as bicycling and rowing, and "conducive to good mental health." Many people also commented on characteristics that are intangible "but acknowledged by everyone." These included "a leisurely lifestyle"/"more manageable pace of living." Those who mentioned locally grown fresh food emphasized that there was an actual *but-not-always-realized* potential for such food to sustain the population.

Table 85. Perceived Positive Health Attributes of Lake County by Frequency of Mention, Key Informants (n=15)

Environmental Factors

- Clean air (mentioned by all)
- Natural beauty; plenty of open spaces (mentioned by all)
- Potential for locally grown fresh food

Other Factors

- Slower (i.e., manageable) pace of life
- Close-knit community
- Strength of the community-based organizations
- Volunteerism; community participation generally high*
- Good quality hospitals
- High quality ambulance providers and coverage ("good EMS/911 system")
- Good place to be for public benefits

*For a different perspective, see comment in Table 86.

A number of key informants cited the strength of a "close-knit community" and believed it resulted in a high degree of volunteerism. One individual had observed "tenacious" local grassroots activities when there were needs. Another believed it was easier to get public benefits in Lake County than in other places, such as the Bay Area, and commented that "beneficiaries get more attention [here] from social workers" (because of the favorable staff to beneficiary ratio).

The strength and quality of local organizations was cited by several people, including the hospitals (despite the comment below about competitiveness) and emergency medical system. One key informant remarked that both hospitals had a good rapid response and smooth referral process for stroke and heart attack patients.

One key informant remarked that Lake County has more health and human services resources than most people realize, but suggested it's important to make the community—particularly those who go intermittently to health care—more aware of it. Most of the key informants believed community residents, including some health and human services professionals, had a "patchy awareness" because there was little in the way of advertising and outreach.

Challenging Factors

Not surprisingly, problems associated with transportation were mentioned by the greatest majority of key informants as being a negative feature of living in Lake County (Table 86 on the next page). The problem was described as both a lack of adequate public transportation options (to all services, but especially health-related appointments), and the inconvenience of "having a lake smack in the middle of the county with only one good road around it." It was noted that because it is approximately

110 miles around Clear Lake, getting people *to services* was a significant challenge—as was getting service vehicles (e.g., ambulances) *to people*. One individual observed Lake County having "the worst quality roads in the state." A couple of individuals commented that "the bus doesn't run at typical hours" and that medical transportation is "most commonly provided through volunteers."[219] One key informant, who commented on isolation and access problems in the county, also suggested in some cases the distance barrier might be a misperception about how far away things actually were.

Table 86. Perceived Health Detriments of Lake County Characteristics, by Frequency of Mention, Key Informants (n=15)

Mentioned by more than half:
- Lack of adequate transportation (to all services)
- "Pervasive" drug culture with resultant problems
- Challenging geographics (e.g., pockets of isolation)
- Depressed economy/high poverty rate

Mentioned by fewer than half:
- Environmental factors (e.g., wildfires, pollution in lake=harmful mercury levels in fish)
- Inadequate access to good-quality food
- More people who smoke
- Competitiveness between the 2 hospitals ("may be a coordination of care issue")
- Family support absent for some who move here to retire
- Childhood/youth exposure to family violence
- "Independence" of some residents=lack of community engagement (e.g., not very responsive to addressing community problems)
- Lack of a 4-year college/university

The "prevalence of illegal drugs" was also cited by the majority of interviewees as a key detriment about living in Lake County. A couple of individuals felt the problem "seems to be tolerated with no long-term solution in sight." Examples were offered about the impact of "the drug culture" ranging from various types of crime to vehicle crashes to unintended pregnancy.

Another significant negative attribute mentioned was the effect of the depressed economy. Although it is not unique to Lake County, the problem was noted to have a greater impact here than in other places in the state.

[219] As described on page 113 in this report, the County is currently contracting for the development of a non-emergency medical transportation plan for Lake County.

Identified Needs

The interviews with key informants yielded fairly consistent results with the community survey and focus group responses relative to the type of top health needs identified, and some directly tied to the "negatives" they cited about living in Lake County. Because the 16 needs and gaps mentioned covered a wide range of issues, some were only identified by few interviewees. However, 4 of the priority needs received mention by more than one-third of the group. These included: community-based mental health services (mentioned by 50%); inadequate health insurance coverage; lack of dental care; and inadequate exercise/obesity (Table 87).

Table 87. Top Health-Related Needs Identified by Key Informants (n=15)

Need/Problem	Frequency of Mention
Substance abuse prevention and treatment (including tobacco and alcohol)	6
Transportation (mainly non emergency, to medical appointments)	6
Lack of in-county specialty care (various, including psychiatry)	6
Affordable health care (for non-insured/under-insured)	5
Dental care (mostly regarding adults/seniors)	4
Mental/behavioral health (mostly counseling, non acute)	4
More exercise/mobility (mostly related to obesity mention)	3
"Epidemic" of obesity and diabetes/poor health habits	3
Food (as a resource issue for low-income families; better choices about)	2
More engagement with/by tribes (to better understand; "for them to prosper")	2
In-home support services for seniors	1
Senior centers to be more multi-purpose "as intended" (funding needed)	1
Preventive health education	1
Vision services for low-income	1
Broader scope of services/more travel allowed for public health nurses	1
Better overall coordination of health care system	1

Substance Use/Abuse

Most of the interviewees who identified substance abuse as a top priority concern did not focus on any one age, ethnic, or other group, but identified the need across the board for both preventive measures (e.g., education of parents, adolescents), more enforcement (including of growing and selling), and treatment services. The lack of residential services in the county was also noted. Illegal substances were most frequently referred to, but several key informants also mentioned the need for people to stop smoking or, for young people, to not start in the first place. Alcohol use/abuse was not specifically mentioned.

Transportation

The need for transportation identified as a top priority was consistent with earlier comments about geographical access and inadequate public transportation options.

Health Access (Affordability and Specialty Care)

When mention of these two related topics is combined, they comprised the majority of the comments about priority community needs for health care services. Several individuals commented on the loss of employment-based insurance, including for the "formerly middle class," and its effect of hampering people from seeking needed medical care or routine screenings. Two individuals specifically mentioned the inadequate number of private Medi-Cal providers in the community. (Although the key informants were likely to be familiar with the community health centers, no one referenced these resources relative to their availability of sliding fee scales and acceptance of Medi-Cal.) The interviewees generally believed that among age groups, seniors were likely to experience the greatest extent of problems accessing services largely because of transportation issues or unawareness or confusion.

Consistent with findings about where people go for care from the community survey conducted for this assessment, key informants identified the lack of enough in-county medical specialists. Most understood, however, that the area's economic base could not support all or a sufficient range of specialty services.

Dental Services

Dental-related needs were generally expressed by key informants as access issues and service gaps, along the same lines as their concerns about medical needs, rather than observations about the extent of dental disease. Needs related to adults/seniors were cited most frequently, probably because of the recent elimination of Medi-Cal adult dental services. While the interviewees did not offer specific details about oral health conditions two people commented on the effects of seniors not having dentures because of cost—for example, difficulty in eating and self-imposed social isolation due to embarrassment.

Mental Health

Community-based mental/emotional health services also received attention as a serious community health need in Lake County. Mental health-related services were described in short supply even for those with health insurance. Observations included the lack of adequate family therapy, support groups, and school counselors. A number of key informants referred to increased levels of stress across the community due to the economic downturn and the need for even more counseling resources at this time. One interviewee commented on the difficulty of recruiting psychiatrists and psychologists to increase access, but remarked that while there was an adequate patient base (volume) the many who could benefit were on government assistance

which paid low reimbursement rates, adding to the challenge of attracting qualified professionals.

Exercise/Healthful Living

Lack of exercise and the growing epidemic of obesity also received a good deal of attention; these concerns were generally combined with mention of other problems associated with not adopting a preventive health/healthy lifestyle such as poor nutrition and diabetes. A few of the key informants mentioned that while the county offered many places to hike, bike trails were "non existent or of such poor/unsafe quality" they were unusable, as were "decent" walking trails to accommodate people in wheelchairs or with disabilities.

Comments about nutrition included the need to educate people about making better choices about types of food to eat (regarding both over- and under-nutrition) and because of abject poverty in the county, the basic need for food as a resource.

While the need for preventive education was identified, two key informants observed that many people moved to Lake County after a lifetime of smoking and poor eating habits (which helps explain why some rates of health status indicators are higher than average), also necessitating after-the-fact education and intervention.

Suggested Solutions

The key informants were asked to identify the priority recommendations that would be the "most important for improving health in Lake County/best use of resources if you were 'in charge' and had the resources." The interviewees were somewhat consistent in suggesting ideas and solutions for future funding/policy changes that matched the priority problems and unmet needs they identified (Table 88 on the next page).

Table 88. Strategies Key Informants Believe Should Receive Priority Funding Support (n=15)

Recommendations (support for….)	Frequency of Mention
Focus on community residents	
Ongoing public education campaign about resources; targeted outreach	4
Transportation options (vouchers; cab company contracts; paratransit vehicles)	4
Expanded capacity of health clinics in rural areas, including using mobile clinics	4
In-home support services (including reforms)	4
Food/feeding (community and school gardens = 2; develop a food coalition = 1)	3
Strategies to attract more medical specialists	2
Pay for prescriptions for low-income (seniors/adults)	2
Wellness/fitness centers for small businesses	1
Anti-smoking campaign; more tobacco reduction strategies	1
Health insurance product for low-income adults with no coverage	1
Major community engagement process (“inundate the county with information”)	1
Significant early intervention/education in the schools (e.g., topic of HIV/AIDS)	1
Increased telemedicine capacity/other technologies that benefit isolated areas	1
Bike/walking trails that accommodate wheelchairs/medical devices	1
Senior center services (multiple)	1
Buy another ambulance for the county	1
Focus on the professional community	
Better coordination of planning and delivering services	1
Explore consolidation of the two hospitals’ home health agencies	1
Broadband development for professionals	1
Increase role of Public Health Dept to take the lead in looking at chronic gaps/increase low-cost preventive services	1

Note: In some cases, overlapping recommendations are listed separately to emphasize varying ideas about similar suggestions.

Just over half of the key informants suggested priorities that would increase access to direct medical services in some way. The most common of these suggestions was to expand rural health clinic services, with several individuals remarking about the value of mobile clinic services. Other ideas related to paying for strategies that would attract more medical specialists, paying for prescriptions for low-income seniors and other adults, and creating a health insurance product for low-income adults with no coverage similar to children’s health insurance programs.

Ideas for seniors, mentioned within the broader categories identified in the table above included the following:

- Invest in purchasing safe shoes and providing them to seniors to reduce the number of senior falls.
- Disconnect Lake County from Mendocino County and provide Lake with its own Area Agency on Aging.

- Support additional In-Home Support Service (IHSS) case workers and provide better on-the-job training for them concerning information about prevention/wellness/ healthful lifestyle; examine the IHSS system in Lake County for needed reforms and address them.
- Examine the Durable Power of Attorney system in Lake County for needed improvements and strengthen it.
- Develop and support a program for Aging Studies at Mendocino Community College to increase awareness and prepare people who may wish to pursue a career in gerontology.

A couple of individuals spoke at length about the importance of eating well and recommended more attention be paid to nutrition for the sake of overall health as well as concerns about diabetes and obesity. They believed the "food crisis" was a resource issue—residents who were under-nourished and poorly nourished due to poverty—as well as a basic lack of understanding ("they don't know about better food choices") and convenience ("people don't cook anymore"). Specific recommendations for priority projects included:

- Create and support a Food Coalition and sustain it long-term; use it for advocacy and education.
- Support community gardens; start first with school children. The benefits include people feeling empowered, getting outside and away from the TV, and eating "real food." The idea is low-cost but would have a high community impact.

The ideas aimed at the professional community regarding technology were intended to increase professionals' ability to communicate, such as telemedicine for specialty consults, teleconferencing for continuing learning and communicating with other colleagues throughout the state and country, and increasing the capability to provide more "mass" public education activities and events.

CONCLUSIONS AND RECOMMENDATIONS FOR PRIORITY CONSIDERATION

"Some people have the belief someone else should be taking care of them when their health problems were caused by their own poor lifestyle choices."—Key Informant Interview

Physical health, mental health and social conditions are interrelated to the extent that they are dependent on each other and impact each other. For example, the public health approach to mental health includes working with individuals, communities and systems and focuses on prevention and health promotion. This includes promotion of behaviors and activities to enhance overall health and well-being and prevention activities that benefit everyone.[220]

The inter-relatedness of various health conditions is not limited to mental health, though many mental health conditions are clearly chronic diseases that are associated with worse health outcomes (e.g., increased risk of myocardial infarction in people with depression).[221] Sometimes, one condition may pose a barrier to accessing or receiving optimal benefits from the health care delivery system (e.g., mental illness, physical or developmental disabilities). Similarly, oral health is linked with cardiovascular disease and emerging research shows it may influence perinatal outcomes.[222,223]

Overall functional status depends on numerous factors, including general fitness, positive self-image and overall sense of well-being. Although health indicators are measured in separate categories, they are inherently interrelated and collectively result

[220] Mental Health, Chronic Disease and Genomics. Minnesota Department of Health. http://www.health.state.mn.us.
[221] Guck TP, et al. Assessment and treatment of depression following myocardial infarction. *Am Fam Physician.* August 2001;64(4):641-648.
[222] Boggess KA, Edelstein B. Oral health in women during preconception and pregnancy: implications for birth outcomes and infant oral health. *Matern Child Health J.* 2006;10:S169–S174.
[223] Offenbacher S, et al. Effects of periodontal therapy on rate of preterm delivery. *Am J Obstet Gynecol*. September 2009;114(3):551-559.

in what we experience as a state of health. Improving the health of the community depends on an effective healthcare system, but is also enhanced by the social infrastructure and services that are not traditionally recognized as serving healthcare needs.[224]

Traditionally, society has focused on improving population health primarily through health care delivery systems (e.g., clinics, hospitals). However, the need for broad partnerships involving other sectors—business, education, the media, public safety—is clear to build sustainable and effective efforts to improve community health. It has become increasingly important to identify modifiable environmental attributes that can be used in planning, policy, and practice; promoting walking, for instance, is a centerpiece of public health strategy for preventing chronic disease, because of its popularity and known health benefits.[225] Strong local leadership also plays a significant role in forming cooperative partnerships that can maximize resources and build capacity in a community.[226]

The 2010 Lake County Community Health Needs Assessment represented a cooperative partnership that identified challenges, such as the major health risk of obesity and dental needs of seniors, and high-risk behaviors like smoking. The assessment identified trends on issues of special significance to Lake County, such as the growing numbers of seniors and low-income populations. It also sheds light on opportunities for improving health concerns related to sociodemographic factors and disparities and the community's overall health status.

The extensive data—from primary as well as secondary sources—available from this assessment process supplements information collected by others and will be a valuable resource for future planning and grantseeking. The findings give the community a lot to act on over time. The community input findings should be especially useful for understanding residents' and professionals' perspectives about community health. While a diverse segment of the population was surveyed, the less-than-hoped for proportion of Latinos and Spanish-speaking residents in the Community Survey somewhat decreases the representativeness of the findings for this specific population.

Certain findings were expected and supported the Collaborative's assumptions: the percentage of the adult population without health insurance, difficulties related to transportation, rates of childhood asthma—despite the good quality air—and the extent to which the community depends on community clinics as the primary safety net for the poor, to name a few. However, some findings *were* a surprise. On the positive side, these included the high degree of community awareness about the value of healthy living, the percent of children insured all year with Medi-Cal/Healthy Families, healthy dental screening results of young children, the percent of seniors who reported getting a flu shot, and the proportion of seniors who reported they had not experienced any days

[224] Karen M. Tait, MD, Lake County Health Officer. Communication to the author. August 13, 2010.
[225] Sugiyama T, et al. Associations between recreational walking and attractiveness, size, and proximity of neighborhood open spaces. *Amer J Pub Health* September 2010;100(9):1752-1757.
[226] *The 2009 Report to the Secretary: Rural Health and Human Services Issues.* The National Advisory Committee on Rural Health and Human Services. April 2009

of poor mental health in the last month. Equally encouraging, among community focus groups and survey participants there seemed to be a move away from simply "I need a doctor" to more of a sense of understanding the need to manage their own health.

On the other side, the growing trend toward obesity among children and adults—mirroring state and national trends—the rate of diabetes, the reported use of alcohol and other drugs by 5th graders, the use of substances during pregnancy, food insecurity among seniors, and the percent of adults who smoke were anticipated but the extent of the problems were unexpected.

Anxiety and stress were troublingly common themes revealed through the surveys and focus groups conducted for this assessment, and supported in similar findings by others: parents worried about kids' drug use; teenagers and adults anxious about the lack of jobs; people fearful of losing their homes. Reviewing the published data in conjunction with the results of the community input not only created a better understanding of what the mental health needs are, but suggested that while the needs—created in part by the economic downturn—may be similar across the community; the difference is access to resources.

On balance, Lake County does not look markedly different from other rural California counties with regard to many of the commonly examined community health indicators. While Lake County benefits from indicators where it does well—clean air and supportive factors like a manageable pace of life, for instance—it does have some significant challenges that require attention: higher death rates for most causes than statewide averages; disparities in chronic disease prevalence; high unemployment; and access for the under-insured and uninsured, to name a few. In addressing these issues, Lake County also faces underlying challenges similar to other small counties in epidemiologic investigation; workforce recruitment, retention, and training; physical and human infrastructure; and technology capacity.

RECOMMENDED PRIORITIES

The Collaborative recognizes that while each organization represented among the workgroup will ultimately choose to fund or support community health interventions that are a best fit with its own mission and priorities, an important opportunity exists in Lake County for all health partners to collaboratively focus on the prioritity areas identified below, maximizing the potential for community impact. In a scenario with limited resources—and the special challenges of poverty and basic needs Lake County faces—the Collaborative believes these areas should receive highest-priority consideration for focusing resources on community investments.

The elements needed to successfully implement the priorities in Lake County, and ideas for strategies—some based on model programs elsewhere—are offered below. Some of the listed strategies intentionally overlap to address multiple problems. The lists are not intended to be exhaustive and certainly do not imply there aren't other ways to address these issues. Importantly, effective strategies must take into account in their design important factors such as the following ones on the next page:

- Personal factors (such as genetic, behavioral….)
- Service availability factors (such as resources, capacity….)
- Environmental factors (such as culture, policy….)

While health and human services organizations are expected to be key players in community health improvement, some of the solutions are likely to come from the non health community as well.

Please note there is no particular significance in the order of the following priorities.

Priority: Senior Support Services

The goal of senior support should be to provide senior citizens with a full range of services to help them stay healthy (mentally as well as physically), live independently, and maintain their dignity. Such programs should offer clients and their families compassionate, practical, economical, and legal-based solutions to successfully manage difficult life situations. Strategies that address this priority area should consider the following:

- The number of Lake County residents who will suffer functional disability due to chronic conditions of arthritis, stroke, diabetes, coronary artery disease, cancer, or cognitive impairment is expected to increase. Studies have shown that education and lifestyle changes—where seniors are taught how to better manage their symptoms, adhere to medication regimens, and maintain functional ability—can reduce disability, control costs, and have a positive influence on the quality of life.

- Poverty rates among the county's seniors suggest the basic need of having enough to eat is not being met. Food assistance for better health and saving money for isolated and needy seniors includes home-delivered meals, senior center meals, shelters, and food banks (that offer fresh produce). Existing channels and trusted community partners should be used to identify and deliver outreach information.

- Community gardens are an ideal opportunity for promoting good nutrition as well as social interaction and exercise. Involving seniors in school gardens can encourage intergenerational engagement, meeting multiple goals of fitness, diet, and mental health.

- Remedies for social isolation/depression blur the line between improving mental and physical health. Opportunities for expanding activities at senior centers, churches, social clubs, parks, and similar places that could attract seniors that challenge creativity and make people feel productive (e.g., gardening, drawing, writing, playing an instrument, building things) should be explored. Expanding adult day care programs, that also provide respite for family caregivers, are a model strategy. There would also be an economic benefit of employing more local caregivers if there is a way to fund it.

- All projects developed for seniors need to address solutions for seniors transportation. While public transportation is economical, it may be unrealistic for seniors and can pose special challenges; for instance, sight impairment, poor balance, and inability to tolerate waiting outdoors may make public transportation options impractical. Taxis, volunteer drivers, and gasoline vouchers may be more feasible solutions.

- Siting programs where seniors are ("seniors neighborhoods," retirement centers, assisted living facilities) rather than where they have to travel to increases the likelihood that the most-frail will be able to participate.

- Community design policies often ignore the special needs of senior residents. For instance, an assessment might be valuable to take into account pedestrian crossings in areas where more seniors live who may need a little extra time crossing the street.

- A falls prevention program for seniors can help reduce falls and serious injuries; strategies include offering education about home safety tips, conducting safety assessments, nutritional assessments, and providing devices and needed apparatus (e.g., handrails, "safe" shoes) at no cost for low-income seniors.

- A collaboratively-designed and held gerentology summit could be a valuable way to increase community and provider awareness of major health-related issues of seniors, and move the community to work toward implementing needed policies and programs.

- Caregivers are at increased risk of depression and other health problems as a result of the stress of being a caregiver. Respite services provide a support system to give families the break they need to care for a loved one who has a chronic illness or disability. Typical strategies include adult day programs and in-home companion services. Ideally, respite care should be preventive, rather than the result of a crisis.

Priority: Substance Abuse/Use

Substance use and abuse includes the use of legal (tobacco, alcohol, prescription drugs) and illegal substances, and ranges from use during pregnancy to underage drinking to abuse of prescription medications. The problem impacts families, schools, businesses, and the safety of the community. The stakes are especially high for young people: teens who make it to age 21 without smoking, using illegal drugs or abusing alcohol are unlikely to ever do so, research finds.

- Helping parents to talk with their kids about alcohol is one way to begin. Publications for parents, in English and Spanish, are available, such as the one developed by the Catalyst Coalition in Napa.

- Ongoing continuing education programs, particularly for middle school and high school students, such as "Every 15 Minutes," can be effective, preventive strategies. Importantly, educators need to remember in their program design there are profound differences in the adolescent brain that make youth developmentally incapable of always making good judgements. Education programs for adults and seniors about responsible drinking are also needed.

- Implementing a Social Host Ordinance[227] to address youth access to alcohol on private property (such as at a party at someone's home) is an effective tool in helping to reduce the problem of underage drinking.

- A brief intervention in the emergency department (ED) may help reduce violence and alcohol abuse among teens, suggesting an opportunity for training of local ED staff. According to research, teens who received a 35-minute brief intervention delivered either by computer or a therapist addressing violence and alcohol reported reductions in peer aggression, experience of violence and consequence of violence 3 months after the intervention, along with a big drop in alcohol consequences.

- More mental health screening (e.g., surveys, onsite counselors at school and community-based organizations) for young people who smoke could be offered to determine if there is a correlation with poor mental health. Research suggests teen smokers are not only more likely to use alcohol and illegal drugs but also more likely to have panic attacks, anxiety disorders, and depression. Identifying the underlying depression and referring to appropriate resources would likely enhance school/work performance.

- Non traditional advocates may in some cases have more influence on youth behaviors than parents. An accountability relationship with a mentoring adult (teacher, older relative), a caring athletic coach, or a "cool" clergy member may provide the necessary support system to resist peer pressure or influence whether a young person takes up smoking. Peer education approaches, such as the State's Too Good for Drugs (TGFD) curriculum, have been well received by middle school students as well as teachers and administrators.

- Implementing alternatives to substance abuse, such as community bikathons, basketball games, swimming races, cooking contests, and so forth could have the twin benefit of increasing physical activity (as well as mental health).

- Prenatal care providers need more education about the long-term impact of substance exposure during pregnancy. Effective methods like Lake County's *4P's Plus*© screening and intervention program could be expanded to include more provider education with additional support.

[227] A Social Host Accountability Ordinance holds accountable the host of a gathering where underage drinking is allowed to occur or gatherings that are loud or unruly. Anyone 18 years of age or older who hosts such a gathering will be subject to the ordinance and a fine. If the host of such a gathering is 17 years old or younger, the parents of that minor will be held jointly responsible with their teen and subject to a fine, even if they were not present or aware of the gathering.

- Social marketing campaigns to change socio-cultural norms about drug and alcohol use, including smoking, have been successful. Mass media (TV, radio, print media…) may be a particularly appropriate mechanism to disseminate prevention messages, but are most successful when integrated into a comprehensive campaign strategy. Themes could stress responsible behaviors (e.g., self-medicating), social norms around smoking, and improved understanding of risks such as violence and communicable disease.

- Although some experts question the cause-and-effect relationship, alcohol and drug abuse can be a significant factor in domestic violence. Alcoholism, for instance, can spiral into a full-fledged "family disease," affecting many lives. Early identification, referral, and intervention with students and parents at risk, and community-wide communication campaigns to influence community norms about substance abuse and violence are key strategies. Additionally, policies that control the availability of alcohol, tobacco, other drugs, and weapons through pricing, deterrence, incentives for not using, and restrictions on availability and use are effective at preventing behaviors associated with these substances and weapons.

Priority: Preventive Health

Many population studies have identified major risk factors and strategies to prevent or reduce them. The risk factors most amenable to being modified, treated, or controlled include tobacco use, high blood cholesterol, high blood pressure, physical inactivity, obesity, and diabetes. A focus on preventive health and wellness has economic as well as quality of life payoffs as the long-term benefits over a life span have been shown to be cost-effective. Recommendations to improve community health related to the priority of preventive health include the following:

- Examples of environmental change strategies to promote preventive health include planning communities in a way that increases walkability, safe places to bike (including a free bike program), and expanding access to fresh fruits and vegetables in neighborhoods. Environmental strategies are sustained through policy and systems change.

- Forming a nutrition and weight coalition provides leadership for the community and would serve as a resource for evidence-based strategies and projects that schools, families, and communities could undertake to promote children's health through sound nutrition and physical activity. For example, schools can model healthy eating and nutrition by offering only healthy breakfast, lunch and snacks, and better food and snack choices in vending machines.

- Other youth-oriented nutrition programs that could be expanded include Farm-to-School and 4-H programs, and preschool and school-based nutrition programs such as expanding the CATCH (Coordinated Approach to Child Health) curriculum. With additional support, teacher, food service, and administrator training on the CATCH program could be expanded throughout the county.

- Community food policy decisions that could be made include menu labeling ordinances.

- Developing and maintaining community and school gardens help engage children and adults in healthier eating. Expanding the capacity of local food banks to offer high quality *fresh* produce sends the right message about freshness, and helps meet the basic needs of people impacted by the economy.

- Physicians recognize obesity as a national health problem, but statistics show that only about half of obese Americans (but a lower proportion of Latino and Black patients) are advised about proper nutrition by their doctors. Studies have also found that while most doctors want to help patients lose weight and think it is their responsibility to do so, they often don't know what to say. Opportunities should be explored for physician education to understand the health impact of obesity and practical ways to incorporate patient education into busy practices.

- Overweight women are more likely to experience pregnancy and birth complications. Besides education about cutting out any habits that could be harmful to a baby, preconception services (family planning clinics, for example) could also address achieving and maintaining a healthy weight before as well as during pregnancy.

- Prevention initiatives and activities should also emphasize self responsibility and self-management of conditions.

- Educational interventions should be directed at what it takes to get people to make long-term behavioral change (e.g., providing meaningful incentives), and be provided in places where people already meet or gather for other purposes. To be long lasting, health and wellness strategies should address the whole family.

Priority: Mental and Emotional Health and Well Being

Creating a healthier community also involves efforts focused on promoting good mental health and positive social and emotional development. Opportunities to support community-based mental health efforts are even more essential as recent government funding cutbacks have limited the County's capacity for serving non acute clients.

- The foundations of many mental health problems that endure through adulthood are established early in life through the interaction of genetic predispositions and sustained, stress-inducing experiences. Practitioners and policymakers should be provided this knowledge to motivate them to address mental health problems at their origins, rather than only when they become more serious later in life.

- Mental health services for adults would have broader impact if they routinely included attention to the needs of children as well—for example, an automatic assessment of any young children in the family to see how they are experiencing the

emotional consequences of their parent's problems. This suggests closer coordination between mental health providers and medical providers, childcare providers, and schools, in compliance with privacy laws.

- Multigenerational, family-centered approaches offer promising models for preventing and treating mental health problems in young children. Suggested strategies can include providing information and support to address problematic child behavior, initiating therapeutic interventions to address significant parent mental health or substance abuse problems, end domestic violence, or help families to cope with the burdens of persistent poverty.

- To increase the likelihood of continuity and success, there is evidence that integrating mental health services into direct healthcare service programs, such as at Mendocino Community Clinic, or helping people access the services through Family Resource Centers, is an effective strategy. These programs also work best if they're a cultural fit.

- More "talk therapy" opportunities are needed, not just prescribing of medication. There has been a 5-fold increase in the use of psychoactive drugs for children with behavioral or mental health problems, for example. In addition to supporting more low-cost professional mental health therapist services, organizing and supporting less formal venues for people to vent, express concerns, and make helpful suggestions and generally be supportive to one another, in a setting with a trained facilitator, would be a valuable strategy. People in Lake County reported a great deal of general anxiety and depression that was situational (e.g., "the bad economy"), and would likely be appreciative to learn about such support groups. Faith-based organizations (whose members might be more inclined to just accept their circumstances) could be reached out to to become involved.

- Similarly, there is evidence that training and utilizing "natural helpers" such as hair dressers and bartenders—who frequently listen to people's personal problems like job loss and marriage woes—is another way of providing an effective helping community. These helpers are generally familiar to and trusted by their customers, and generally require training in basic helping skills and information about referral resources. It might be particularly interesting to build an evaluation component around such a community-based training system.

- Community, social, and faith-based organizations that typically don't address mental health issues could play a larger role for their members. So could people in "guidance" positions such as coordinator/managers of mobile home parks and apartments. Reaching out to leaders of those groups and making them aware of the extent of the community's concerns—for example, sharing the results of this community needs assessment—would be an important first step. A community education program about depression and how to talk about it is another example of a helpful strategy.

- Post partum depression[228] is the most common complication of childbearing. Often, the depression is not recognized or treated. Strategies such as a perinatal home visiting program—which should be open to parents of every new baby in Lake County—should be widely publicized and supported.

- The number of veterans dealing with PTSD (Post Traumatic Stress Disorder) is staggering. A 2008 study found that 1 in 5 vets returning from Iraq and Afghanistan experience symptoms of PTSD or major depression. Even though the Veterans Affairs has resources to help in Lake County, local providers should be aware of this phenomenon, and that they may need to pick up some of the burden for service members and their families.

Additional Recommendations

The Collaborative believes projects based in the community have the best opportunity to make a real difference in the health of individuals and their families and those providing care. Visions for future community support in all of the priority areas will require identifying suitable leadership, raising awareness of stakeholders and determining how to involve them, and agreeing in what areas and how each group will cooperate. Consequently, the Collaborative should:

- ensure that the findings and recommendations from the current needs assessment are widely shared with the community to raise awareness of the issues, and sustain existing and engage new partners and stakeholders in working toward solutions;

- continue to meet on at least a quarterly basis to maintain the momentum from this successful collaboration process, and to track progress in implementing the priorities so that efforts can be measured in subsequent needs assessments.

[228] Actually, depression that occurs during pregnancy or within a year after delivery is called *perinatal* depression.

ATTACHMENTS

ATTACHMENT 1

LAKE COUNTY COMMUNITY HEALTH NEEDS ASSESSMENT WORKING COMMITTEE

(In Alphabetical Order)

Catherine Rada, Corporate Compliance Officer/Grants Administrator
Mendocino Community Health Clinic, Inc.

Jack Buell
Sutter Lakeside Hospital

John Pavoni, Board Chair
Mendocino Community Health Clinic, Inc.

Jim Brown, Director
Lake County Health Services

Karen Tait, MD, Health Officer
Lake County Health Services

Krista Touros, MBA, Assistant Administrator of Finance
Sutter Lakeside Hospital

Kristy Kelly, Director
Lake County Mental Health Department

Linda Schulz, MS, Director, Community Services
St. Helena Hospital Clearlake

Mike Parkinson, Senior Analyst
Area Agency on Aging of Lake and Mendocino Counties, PSA 26

Rob Ottone, Former Executive Director
Lake County Tribal Health

Susan Jen, MPH, MA, Director
Health Leadership Network

Tom Jordan, MPIA, Executive Director
First 5 Lake

ATTACHMENT 2

COMMUNITY FOCUS GROUP QUESTIONS

1. **Everybody has health-related needs. When you think about people in Lake County that you know—friends, family, neighbors, co-workers—what do you think are the most important health needs they face?** *(Note especially the things that are mentioned right off the bat without any prodding. Don't try to create a laundry list. Ask for clarification if something is vague (e.g., if someone says "women, after they've given birth"—do they mean postpartum depression? Do they mean family planning needs? Do they mean mothers needing to find a doctor for well-baby exams?....) After people have finished (or mostly finished) responding, try to get a sense of which health needs mentioned—you should repeat them if not using a flip chart—resonated most with the group so later you can summarize the top-ranked items. Don't try to get the group to go through a ranking process)*

2. **What are some of the things that you, personally, do to keep yourself as healthy as possible?** *(Just list what they say without prodding. However, if necessary to get them to think outside of the "medical norm," you might have to prod with questions like, "What about the things you do to stay safe?" "What about other daily habits?" If they don't address emotional/ mental, then ask "And, what about maintaining good mental health?")*

3. **There are a number of programs and services in this county that help people with health-related needs and problems.**

    a. **Do you think most people know about those services—about where they can go?** *(Look for familiarity, awareness of resources; note resources people mention that they depend on for information)*

    b. **Do you think the programs and services available in this county are mostly meeting people's needs? If not, why?** *(What you're looking for are answers to "Are the services effective? Appropriate? Available? Affordable?*

    c. **What are some of the main reasons people don't take care of these needs/problems or have trouble trying to?** *(With this question, you're looking for barriers—both personal and those related to "systems." Try to identify the main barriers that interfere with getting the identified health needs met; drill down on what they say contributes—consumer attitudes/beliefs/norms? Provider attitudes? Cultural and linguistic issues? Logistics—transportation and childcare? [If they say "transportation," find out specifically what they're referring to.] Financial concerns? Lack of available services?)*

4. **If you were in charge of improving things and you could improve the health of people in Lake County, what would be a couple of the things you would do to help? For example, if you won the Lottery, how would you use the money?** *(Look for ideas/solutions—particularly the ones that might resonate with the Collaborative organizations—and be sure to help the participants tie their recommendations back to the health needs they identified. Look for perceptions about what makes a healthier community)*

ATTACHMENT 3

KEY INFORMANT INTERVIEWS AND OTHER CONTACTS

(Alphabetical Order)

Person Contacted	Agency/Organization
Key Informant Interviews	
Betsy Cawn, Community Advocate	Lake County
Carol Huchingson, Director	Lake County Social Services
Debra Sommerfield, Chief Administrative Officer	Lake County Economic Development
Denise Rushing, Supervisor	Lake County Board of Supervisors
Dennis Fay, Executive Director	Community Care Management Corporation
Diane Pege, MD, Vice President, Medical Affairs	Sutter Lakeside Hospital
Gloria Flaherty, Executive Director	Lake Family Resource Center
Karen Tait, MD, MPH, Health Officer	Lake County Public Health
Ken Wells (Chief), Bob Ray (Batallion Chief)	Lakeport Fire Department
Marti McCarthy, Executive Director	Community Care
Nancy Powers-Stone, Executive Director	Redwood Caregiver Resource Center
Rob Brown, Supervisor	Lake County Board of Supervisors
Rozann Brown, Outreach & Training Specialist	Inter-Tribal Council
Sandra Zapata, Regional Coordinator	California Human Development Corporation
Siri Nelson, CAO	Sutter Lakeside Hospital
Interviewed/Consulted for Specific Information	
Anne McAfee, RN	Mendocino Community Health Clinic, Inc.
Bob Penny	Veteran's Services
Marta Fuller	Lake County Public Health
Sherylin Taylor, PHN	Lake County Public Health

ATTACHMENT 4

KEY INFORMANT INTERVIEW QUESTIONS

INTRODUCTION: *

[Review purpose and intended use of the needs assessment. Ask how long they've worked/lived in Lake County and information about their organization]

QUESTIONS:

1. Have you seen the Consumer Survey that was recently distributed in the community in hard copy, or the one we put online?

2. What do you believe are unique characteristics of Lake County that contribute to people's health in a positive way? What do you think threatens or contributes to poor health?

3. Thinking about the cross section of people in Lake County—adolescents, seniors, young parents, ethnic minorities, city dwellers, rural residents—what are the greatest ("top 3") health needs people here face?

4. Are there specific data that substantiate the problems you've described – data you're aware of that we might not be – that could help inform our assessment?

5. What resources are you aware of that are available to address these [the needs you identified] health needs? (examples: names of organizations, community expertise, advocacy, other identified strengths and assets…..) To what extent do you think most people who need these resources are aware of and know how to access them?

6. What do you see as the main barriers to meeting these needs? (structural + personal)

7. What are your recommendations about how funders can help meet these needs? i.e., what are your ideas for improving health in Lake County?

8. Are there any policy changes that are needed to implement your recommendations? What would it take to make those changes?

9. Do you have any additional comments or information you would like to share?

* Questions were not always asked in the same order. Questions were modified where necessary, e.g., to avoid asking something that was already well known. Additional questions were asked for purposes of clarification, to drill down on a response, or to tap into the interviewee's knowledge/experience to capture additional information. Each interview began with an explanation of the purpose (which was a repeat of the explanation provided in the introductory email contact when we requested an interview), assurance of confidentiality, and intended use of the information.

Appendix 5-1

Comparison of Health Needs by Age Group, Community Survey n=869)

Health Need	All Respondents		18-24 years		25-39 years		40-64 years		65+ years	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Health Services	**530**	**61%**	**29**	**49%**	**123**	**65%**	**260**	**67%**	**83**	**50%**
Accessible and Affordable Medical Care	264	30%	8	14%	58	31%	133	34%	47	28%
Dental Services	151	17%	11	19%	52	28%	61	16%	16	10%
Health and Dental Insurance	124	14%	10	17%	25	13%	65	17%	20	12%
Mental Health Services	85	10%	8	14%	20	11%	50	13%	6	4%
Quality Health Services and Facilities	77	9%	2	3%	17	9%	43	11%	12	7%
Affordable Wellness Programs/Health Education/Preventive screenings	71	8%	4	7%	16	9%	36	9%	11	7%
More medical specialty services	51	6%	1	2%	4	2%	33	8%	9	5%
Quality In Home Support Services and Elder Support	43	5%	1	2%	10	5%	19	5%	9	5%
Affordable Medications	28	3%	1	2%	5	3%	12	3%	9	5%
Vision	21	2%	1	2%	5	3%	5	1%	7	4%
Emergency Treatment/Access to local trauma services)	15	2%	0	0%	3	2%	9	2%	1	1%
Alternative Health Care Methods	9	1%	0	0%	1	1%	8	2%	0	0%
24 Hour access to medical care (MDs call, 24-hour clinic, urgent care)	8	1%	1	2%	1	1%	3	1%	2	1%
Hearing	3	0%	0	0%	0	0%	2	1%	1	1%
Nutrition and Weight	**257**	**30%**	**21**	**36%**	**58**	**31%**	**124**	**32%**	**39**	**24%**
Nutrition/Access to Affordable Healthy Food	184	21%	11	19%	47	25%	90	23%	24	15%
Weight Management/Obesity	88	10%	10	17%	19	10%	40	10%	15	9%
Alcohol/Drug/Tobacco	**202**	**23%**	**24**	**41%**	**49**	**26%**	**91**	**23%**	**28**	**17%**
Alcohol and Drug /Addiction	172	20%	21	36%	46	24%	75	19%	20	12%
Smoking	57	7%	5	8%	6	3%	32	8%	13	8%
Marijuana (access to medicinal marijuana)	3	0%	1	2%	1	1%	1	0%	0	0%
Activities and Exercise	**187**	**22%**	**12**	**20%**	**48**	**26%**	**87**	**22%**	**28**	**17%**
Exercise	155	18%	12	20%	39	21%	72	18%	23	14%
Affordable and Accessible Activities	37	4%	2	3%	13	7%	15	4%	3	2%
Sidewalks/Bike Lanes/Walking Paths	11	1%	0	0%	3	2%	5	1%	3	2%
Self-Care	**117**	**13%**	**7**	**12%**	**32**	**17%**	**52**	**13%**	**18**	**11%**
Lifestyle/Self Care	44	5%	2	3%	13	7%	19	5%	8	5%
Social Supports	29	3%	2	3%	4	2%	14	4%	6	4%
Stress and Depression	29	3%	0	0%	8	4%	16	4%	3	2%

Negative Attitude/Lack of Motivation	10	1%	1	2%	4	2%	5	1%	0	0%
Sleep	10	1%	2	3%	4	2%	3	1%	0	0%
Faith	6	1%	0	0%	2	1%	2	1%	2	1%
Health Conditions	**97**	**11%**	**12**	**20%**	**21**	**11%**	**49**	**13%**	**14**	**8%**
Other Health Conditions	41	5%	6	10%	10	5%	20	5%	5	3%
Diabetes	39	4%	4	7%	11	6%	18	5%	6	4%
Heart Problems	38	4%	2	3%	4	2%	26	7%	6	4%
Cancer	32	4%	5	8%	6	3%	15	4%	5	3%
Transportation	**80**	**9%**	**5**	**8%**	**8**	**4%**	**38**	**10%**	**21**	**13%**
Transportation	80	9%	5	8%	8	4%	38	10%	21	13%
Other Needs	**143**	**16%**	**10**	**17%**	**33**	**18%**	**64**	**16%**	**27**	**16%**
Money/Economy/Low Income	41	5%	2	3%	13	7%	12	3%	13	8%
Clean Environment (Air, Water)	29	3%	2	3%	6	3%	14	4%	5	3%
Employment	19	2%	3	5%	3	2%	10	3%	1	1%
Safety	19	2%	2	3%	3	2%	9	2%	2	1%
Housing	9	1%	0	0%	1	1%	6	2%	2	1%
Other	59	7%	4	7%	15	8%	24	6%	13	8%
Missing	101	12%								
Total Respondents	869		59		188		390		165	

Appendix 5-2

Comparison of Health Needs by Self-Reported Health Status, Community Health Survey (n=869)

Health Needs	All Respondents		Excellent		Good		Fair		Poor	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Health Services	**530**	**61%**	**81**	**53%**	**287**	**65%**	**106**	**62%**	**19**	**50%**
Accessible and Affordable Medical Care	264	30%	45	30%	134	30%	61	35%	8	21%
Dental Services	151	17%	19	13%	82	19%	34	20%	6	16%
Health and Dental Insurance	124	14%	16	11%	79	18%	20	12%	5	13%
Mental Health Services	85	10%	12	8%	54	12%	15	9%	2	5%
Quality Health Services and Facilities	77	9%	17	11%	37	8%	16	9%	2	5%
Affordable Wellness Programs/Health Education/Preventive screenings	71	8%	16	11%	39	9%	10	6%	2	5%
More medical specialty services	51	6%	5	3%	35	8%	6	3%	1	3%
Quality In Home Support Services and Elder Support	43	5%	8	5%	22	5%	6	3%	3	8%
Affordable Medications	28	3%	3	2%	13	3%	8	5%	2	5%
Vision	21	2%	2	1%	10	2%	5	3%	4	11%
Emergency Treatment/Access to local trauma services)	15	2%	2	1%	7	2%	5	3%	0	0%
Alternative Health Care Methods	9	1%	3	2%	4	1%	2	1%	0	0%
24 Hour access to medical care (MDs call, 24-hour clinic, urgent care)	8	1%	1	1%	4	1%	1	1%	1	3%
Hearing	3	0%	1	1%	1	0%	1	1%	0	0%
Nutrition and Weight	**257**	**30%**	**56**	**37%**	**129**	**29%**	**46**	**27%**	**11**	**29%**
Nutrition/Access to Affordable Healthy Food	184	21%	39	26%	91	21%	33	19%	8	21%
Weight Management/Obesity	88	10%	20	13%	48	11%	14	8%	3	8%
Alcohol/Drug/Tobacco	**202**	**23%**	**46**	**30%**	**104**	**24%**	**37**	**22%**	**5**	**13%**
Alcohol and Drug /Addiction	172	20%	37	24%	92	21%	29	17%	5	13%
Smoking	57	7%	15	10%	28	6%	11	6%	1	3%
Marijuana (access to medicinal marijuana)	3	0%	2	1%	0	0%	1	1%	0	0%
Activities and Exercise	**187**	**22%**	**42**	**28%**	**93**	**21%**	**34**	**20%**	**5**	**13%**
Exercise	155	18%	40	26%	71	16%	30	17%	5	13%
Affordable and Accessible Activities	37	4%	4	3%	23	5%	5	3%	0	0%
Sidewalks/Bike Lanes/Walking Paths	11	1%	1	1%	9	2%	1	1%	0	0%
Self Care	**117**	**13%**	**29**	**19%**	**61**	**14%**	**13**	**8%**	**5**	**13%**
Self Care (personal hygiene, personal needs, healthy lifestyle)	44	5%	13	9%	21	5%	7	4%	1	3%
Social Supports	29	3%	7	5%	12	3%	3	2%	4	11%
Stress and Depression	29	3%	6	4%	19	4%	2	1%	0	0%

Negative Attitude/Lack of Motivation	10	1%	3	2%	7	2%	0	0%	0	0%
Sleep	10	1%	1	1%	6	1%	2	1%	0	0%
Faith	6	1%	0	0%	4	1%	1	1%	0	0%
Health Conditions	**97**	**11%**	**16**	**11%**	**56**	**13%**	**20**	**12%**	**4**	**11%**
Other Health Conditions	41	5%	4	3%	26	6%	8	5%	3	8%
Diabetes	39	4%	5	3%	21	5%	10	6%	2	5%
Heart Problems	38	4%	6	4%	21	5%	10	6%	1	3%
Cancer	32	4%	6	4%	20	5%	5	3%	1	3%
Depression	6	1%		0%		0%		0%		0%
Transportation	**80**	**9%**	**7**	**5%**	**40**	**9%**	**18**	**10%**	**7**	**18%**
Transportation	80	9%	7	5%	40	9%	18	10%	7	18%
Other Needs	**143**	**16%**	**29**	**19%**	**61**	**14%**	**32**	**19%**	**11**	**29%**
Money/Economy/Low Income	41	5%	10	7%	18	4%	6	3%	5	13%
Clean Environment (Air, Water)	29	3%	5	3%	12	3%	8	5%	2	5%
Employment	19	2%	2	1%	8	2%	6	3%	0	0%
Safety	19	2%	7	5%	4	1%	5	3%	1	3%
Housing	9	1%	1	1%	7	2%	0	0%	1	3%
Other	59	7%	10	7%	25	6%	15	9%	6	16%
Missing	101	12%								
Total Respondents	869		152		441		172		38	

Appendix 5-3

Health Needs by Cost Barrier, Community Survey (n=869)

Health Needs	All Respondents		Cost Barrier		No Cost Barrier	
	n	%	*n*	%	*n*	%
Health Services	**530**	**61%**	**257**	**67%**	**273**	**56%**
Accessible and Affordable Medical Care	264	30%	127	33%	137	28%
Dental Services	151	17%	103	27%	48	10%
Health and Dental Insurance	124	14%	57	15%	67	14%
Mental Health Services	85	10%	42	11%	43	9%
Quality Health Services and Facilities	77	9%	34	9%	43	9%
Affordable Wellness Programs/Health Education/Preventive screenings	71	8%	31	8%	40	8%
More medical specialty services	51	6%	20	5%	31	6%
Quality In Home Support Services and Elder Support	43	5%	18	5%	25	5%
Affordable Medications	28	3%	9	2%	19	4%
Vision	21	2%	15	4%	6	1%
Emergency Treatment/Access to local trauma services)	15	2%	11	3%	4	1%
Alternative Health Care Methods	9	1%	4	1%	5	1%
24 Hour access to medical care (MDs call, 24-hour clinic, urgent care)	8	1%	3	1%	5	1%
Hearing	3	0%	1	0%	2	0%
Nutrition and Weight	**257**	**30%**	**108**	**28%**	**149**	**31%**
Nutrition/Access to Affordable Healthy Food	184	21%	76	20%	108	22%
Weight Management/Obesity	88	10%	39	10%	49	10%
Alcohol/Drug/Tobacco	**202**	**23%**	**97**	**25%**	**105**	**22%**
Alcohol and Drug /Addiction	172	20%	86	22%	86	18%
Smoking	57	7%	25	7%	32	7%
Marijuana (access to medicinal marijuana)	3	0%	1	0%	2	0%
				0%	0	0%
Activities and Exercise	**187**	**22%**	**69**	**18%**	**118**	**24%**
Exercise	155	18%	54	14%	101	21%
Affordable and Accessible Activities	37	4%	17	4%	20	4%
Sidewalks/Bike Lanes/Walking Paths	11	1%	4	1%	7	1%
Self Care	**117**	**13%**	**44**	**11%**	**73**	**15%**
Self Care (personal hygiene, personal needs, healthy lifestyle)	44	5%	16	4%	28	6%
Social Supports	29	3%	13	3%	16	3%
Stress and Depression	29	3%	9	2%	20	4%
Negative Attitude/Lack of Motivation	10	1%	3	1%	7	1%
Sleep	10	1%	5	1%	5	1%
Faith	6	1%	2	1%	4	1%

Health Conditions	**97**	**11%**	**49**	**13%**	**48**	**10%**
Other Health Conditions	41	5%	21	5%	20	4%
Diabetes	39	4%	21	5%	18	4%
Heart Problems	38	4%	18	5%	20	4%
Cancer	32	4%	16	4%	16	3%
				0%	0	0%
Transportation	80	9%	35	9%	45	9%
Transportation	80	9%	35	9%	45	9%
Other Needs	**143**	**16%**	**70**	**18%**	**73**	**15%**
Money/Economy/Low Income	41	5%	22	6%	19	4%
Clean Environment (Air, Water)	29	3%	14	4%	15	3%
Employment	19	2%	6	2%	13	3%
Safety	19	2%	10	3%	9	2%
Housing	9	1%	3	1%	6	1%
Other	59	7%	30	8%	29	6%
Missing	101	12%				
Total Respondents	869		384		485	

ATTACHMENT 6

HEALTHY LAKE COUNTY QUESTIONNAIRE

The Lake County Health Collaborative* would like your opinion! We are working to improve the health of everyone in our community. Please take a moment and share your views with us. Thank you!

1. What about living in Lake County contributes to people's health and well-being in a positive way? *(Name the first thing that comes to your mind)*

   _____

   What do you think about living here contributes in a negative way?

   _____

2. Which of these health habits most contributes to maintaining *your own health*? *(Check the **2** most important for you)*

   ___ Wearing a seat belt
   ___ Brushing/flossing teeth daily
   ___ Applying sunscreen when outside
   ___ Taking vitamin pills or supplements daily
   ___ Practicing my faith/attending services
   ___ Eating fresh fruit and vegetables each day
   ___ Limiting alcohol (e.g., 1 drink/day) or not drinking
   ___ Rarely eating fast or "junk" food
   ___ Not smoking
   ___ Sleeping at least 7 hours each night
   ___ Not using illegal substances
   ___ Doing some form of exercise (e.g., walking)
   ___ Other (What? _____)

3. Everyone has health-related needs. Thinking about all the people you know in Lake County—neighbors, friends, co-workers, family—what do you think are the "top 3" health needs people face?

   (1) _____
   (2) _____
   (3) _____

4. What are your ideas to improve people's health in our community? *(Choose **3** and put them in order of importance, starting with "1" as most important)*

Rank	*Idea*
___	More support services for the homebound and frail elderly (e.g., choreworkers)
___	More access to affordable wellness type centers and services
___	More low-cost mental health/counseling services
___	More affordable health insurance
___	Improved public transportation options
___	More affordable dental care
___	More efforts to have a cleaner environment (air, water….)
___	More affordable medical care
___	More year-round activities for youth
___	Other (What? _____)

5. When you or your family need medical/dental care, are any of the following *usually* a problem? *(Check "yes" or "no")*

No	*Yes*	
___	___	Childcare
___	___	Transportation
___	___	Finding a place where they speak my language
___	___	Finding someone who takes my insurance (including Medi-Cal)
___	___	Finding somewhere that offers free or reduced-cost services
___	___	Finding an office or clinic that's open when I'm not working
___	___	The ability to take off work when I/my family is sick, without losing pay

6. In what city/town did you last see a doctor or visit a clinic:
   a. for a regular exam/general check-up? _____
   b. for specialty care (e.g., cancer specialist)? _____ [skip if you didn't go to a specialist]
7. How would you rate your general health? ___ Excellent ___ Good ___ Fair ___ Poor
8. How long have you lived in Lake County? ___ Years
9. What is your gender? ___ Female ___ Male
10. What is your race/ethnicity? __Asian __ African Amer. __Hispanic/Latino __White __Native Amer. __Other
11. What is your age group? ___ 18-24 years ___ 25-39 years ___ 40-64 years ___ Age 65+